



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OFFICIAL PHOTOGRAPHIC LOG

EXPLO Systems, Incorporated Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 and LAR000072223

Photographs of Environmental Sampling
Conducted on: April 17th and 18th, 2013

EPA Enforcement Officers:
Paul James and Charles Barnes

Camera: Panasonic Lumix DMC-ZR3



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1038

Direction: West



Subject: Noted dumpster 4034 was uncovered and was leaking from rear door (red arrow).
Noted drainage ditch adjacent to dumpster (blue arrow).

Photo #: S-01



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RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1038

Direction: Down



Subject: Soil sample location SS-01 from below dumpster 4034 rear door, where a leak was noted dripping onto earthen ground.

Photo #: S-02



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1040

Direction: Down



Subject: Soil sample location SS-01 from below dumpster 4034 rear door, where a leak was noted dripping onto earthen ground. Collection of soil sample SS-01.

Photo #: S-03



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 10:42

Direction: Down



Subject: Soil sample location SS-01 from below dumpster 4034 rear door, where a leak was noted dripping onto earthen ground. Collection of soil sample SS-01.

Photo #: S-04



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1052

Direction: Down



Subject: Soil sample location SS-01 from below dumpster 4034 rear door, where a leak was noted dripping onto earthen ground. Tagging of soil sample SS-01.

Photo #: **S-05**



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RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1114

Direction: East



Subject: Noted crack in secondary containment at red water concentration area on west side of Building 1619 (red arrow).

Photo #: S-06



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1115

Direction: Down



Subject: Noted crack in concrete berm at red water concentration area on west side of Building 1619 (red arrow).

Photo #: S-07



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1131

Direction: Down



Subject: Noted crack in concrete berm at red water concentration area on west side of Building 1619 . Collected soil sample SS-02 beneath crack.

Photo #: S-08



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0913

Direction: South



Subject: Two roll off boxes containing fuse conduits, fuse wells, and steel shavings from dismantling of bombs.

Photo #: S-09



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1326

Direction: Down



Subject: Roll off box containing fuse conduits, fuse wells, and steel shavings from dismantling of bombs.

Photo #: S-10



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1326

Direction: Down



Subject: Roll off box containing fuse conduits and fuse wells from bombs.

Photo #: S-11



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1327

Direction: Down



Subject: Roll off box with fuse conduits and fuse wells from bombs.

Photo #: S-12



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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1327

Direction: Down



Subject: Roll off box with fuse conduits and fuse wells from bombs.

Photo #: S-13



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1329

Direction: Down



Subject: Roll off box with steel shavings from dismantling of bombs.

Photo #: S-14



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1417

Direction: Northwest



Subject: Soil sample location SS-03 between roll off box staging area south end of Building 1617 and drainage ditch. Red arrow marks sample location.

Photo #: S-15



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Date of Photograph: APR 17, 2013

Time: 1417

Direction: Down



Subject: Soil sample location SS-03 between roll off box staging area south end of Building 1617 and drainage ditch.

Photo #: S-16



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1424

Direction: Down



Subject: Soil sample location SS-03 between roll off box staging area south end of Building 1617 and drainage ditch.

Photo #: S-17



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1447

Direction: West



Subject: Soil sample location SS-04 in drainage ditch adjacent to road where super sacks of M-6 were stored, east side of Building 1617. Red arrow marks sample location.

Photo #: S-18



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1451

Direction: Down



Subject: Soil sample location SS-04 in drainage ditch adjacent to road where super sacks of M-6 were stored, east side of Building 1617.

Photo #: S-19



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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1458

Direction: Down



Subject: Soil sample location SS-05 adjacent to exterior door from east side of Building 1617, where the crusher line is present. Noted M-6 propellant on the ground (red arrows).

Photo #: S-20



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1459

Direction: Down



Subject: Soil sample location SS-05 adjacent to exterior door from east side of Building 1617, where the crusher line is present. Noted M-6 propellant on the ground (red arrows).

Photo #: S-21



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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1502

Direction: Down



Subject: Soil sample location SS-05 adjacent to exterior door from east side of Building 1617, where the crusher line is present. Sample location is marked by red arrow.

Photo #: S-22



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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1502

Direction: West



Subject: Soil sample location SS-05 adjacent to exterior door from east side of Building 1617, where the crusher line is present. Sample location is marked by red arrow.

Photo #: S-23



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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 17, 2013

Time: 1506

Direction: Down



Subject: Soil sample location SS-05 adjacent to exterior door from east side of Building 1617, where the crusher line is present. Samples collected in jars, waiting tags.

Photo #: S-24



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Camp Minden, Webster Parish, Louisiana

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Date of Photograph: APR 18, 2013

Time: 0922

Direction: East



Subject: West end of Building/Bunker 1631.

Photo #: S-25



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0922

Direction: Up



Subject: Pitted concrete ceiling above the Open Burn Open Detonation Area (OBOD) inside of Building/Bunker 1631.

Photo #: S-26



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0923

Direction: North and Down



Subject: Inside of Building/Bunker 1631. Noted reactive material/waste (D003) being stored.

Photo #: S-27



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0923

Direction: North-Northeast



Subject: Inside of Building/Bunker 1631. Noted reactive material/waste (D003) being stored.

Photo #: S-28



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0923

Direction: North-Northeast



Subject: Inside of Building/Bunker 1631. Noted reactive material/waste (D003) being stored.

Photo #: S-29



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0924

Direction: North-Northwest



Subject: Inside of Building/Bunker 1631. Noted reactive material/waste (D003) being stored.

Photo #: S-30



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0924

Direction: West



Subject: Open Burn Open Detonation Area inside of Building/Bunker 1631.

Photo #: S-31



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OFFICIAL PHOTOGRAPHIC LOG

PHOTOGRAPHERS: Paul James and Charles Barnes

FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0924

Direction: Up and West



Subject: Pitted concrete ceiling above the Open Burn Open Detonation Area (OBOD) inside of Building/Bunker 1631.

Photo #: S-32



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0937

Direction: East



Subject: Soil sample SS-06 located on the west side of Building/Bunker 1631 (red arrow).

Photo #: S-33



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Camp Minden, Webster Parish, Louisiana

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Date of Photograph: APR 18, 2013

Time: 0937

Direction: Down



Subject: Soil sample SS-06 located on the west side of Building/Bunker 1631 (red arrow).
Samples are in jars waiting for tags.

Photo #: S-34



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0939

Direction: West



Subject: Soil sample SS-07 located inside of Building/Bunker 1631 with the OBOD sand pile (red arrow).

Photo #: S-35



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0950

Direction: North-Northwest



Subject: Surface water sample location WS-01, east roll off box staging area and south of Building 1617, within drainage ditch. Red arrow marks sample location.

Photo #: S-36



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0950

Direction: Down



Subject: Surface water sample location WS-01, east roll off box staging area and south of Building 1617, within drainage ditch. Red oval marks sample location.

Photo #: **S-37**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

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Date of Photograph: APR 18, 2013

Time: 0953

Direction: Northwest



Subject: Surface water sample location WS-01, east roll off box staging area and south of Building 1617, within drainage ditch.

Photo #: S-38



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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FACILITY: Explo Systems, Inc.

Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 & LAR000072223

Date of Photograph: APR 18, 2013

Time: 0953

Direction: Down



Subject: Surface water sample location WS-01, east roll off box staging area and south of Building 1617, within drainage ditch.

Photo #: S-39



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Camp Minden, Webster Parish, Louisiana

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Date of Photograph: APR 18, 2013

Time: 1054

Direction: South



Subject: April 18th, 2013 split samples relinquished to Mr. Callahan of Explo Systems.

Photo #: S-40

Appendix B

Satellite Images of Environmental Sampling Locations

Conducted on: April 17th and 18th, 2013

Facility: EXPLO Systems, Incorporated

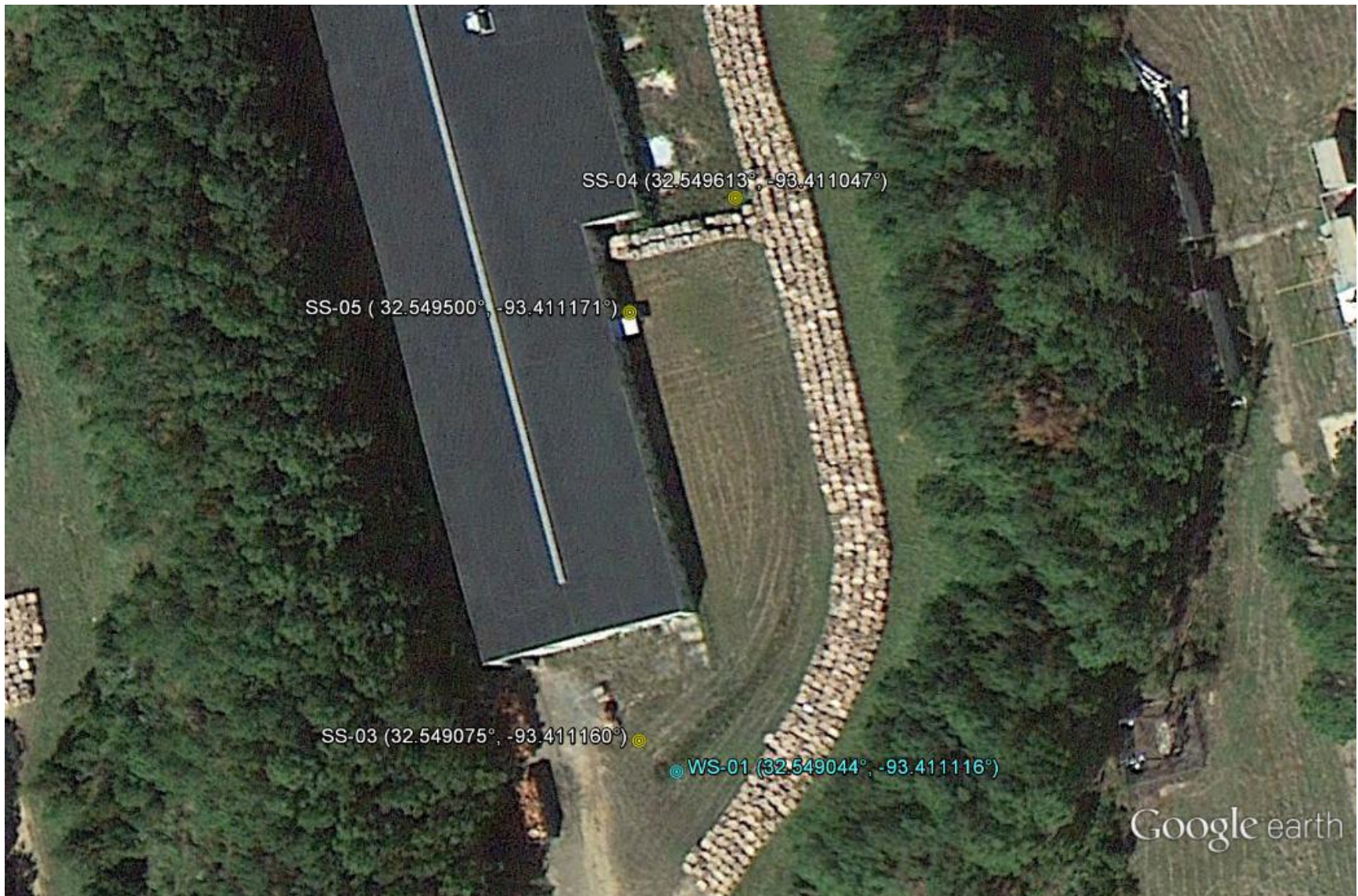
Location: Camp Minden, Webster Parish, Louisiana

RCRA IDs: LAR000032607 and LAR000072223













UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Laboratory

Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Final Analytical Report

Site Name -----Explo
Sample Collection Date(s)-- 04/17/13 - 04/18/13
Contact----- Paul James (6EN-HC)
Report Date----- 05/23/13
Project #----- 13RCRA092
Work Order(s)----- 1304030
1304031

Analyses included in this report:

ABN 8270 Routine List
Metals ICP-MS 6020
Solids, Dry Weight

Metals ICP 6010B
Metals Mercury 7470A/7471A

Report Narrative

Semi-volatiles:

Sample 1304031-02 was re-extracted due to several surrogates failing low. The re-extraction was performed within holding time and all QC passes. Only the re-extraction results are reported.

The surrogate 1,2-Dichlorobenzene-d4 fails low in several samples due to possible over concentration of the extract. Reporting limits (RLs) were raised for the more volatile analytes (Dichlorobenzenes, 1,2,4-Trichlorobenzene, Hexachloroethane, and Hexachlorobutadiene) to ensure non-detects are accurate. Absence or presence at the lower RL could not be verified.

Solid Batch B3D2403: There were several failures in the MS/MSD. Of those only 3,3'-Dichlorobenzidine is significant. This compound did not recover and is rejected in source sample 1304030-01. The other failures were not present in the source sample.

Liquid Batch B3D2216: No extra volume was provided for performing the MS/MSD. A BS/BSD was performed instead.

An isomer of Trinitrotoluene was detected in several samples as a tentatively identified compound. The estimated concentrations are as follows:

Report Narrative (cont'd)

1304030-01 88,000 ug/Kg
1304030-02 100,000 ug/Kg
1304030-05 33,000 ug/Kg

Metals: Mercury:

Batch B3E0101: MSD1: The RPD is greater than the acceptance limit. Mercury spike recovery is adequate and is not flagged; no bias is placed on source result.

Metals ICP-MS:

Batch B3D3008: MS1/MSD1: The spike recoveries for antimony and lead are outside the acceptance limits; the source results are flagged and are estimates.

Metals ICP:

Batch: B3D3005: MS1/MSD1: The spike recoveries for aluminum and iron are outside the acceptance limits; the source results are flagged and are estimates.

Batch: B3D3007: MS1/MSD1: The spike recoveries for barium, zinc, and manganese are outside the acceptance limits; the source results are flagged and are estimates.

The RPD for manganese is greater than the acceptance limits. Source is flagged as estimated due to failures.

The sample results for aluminum and iron exceed the spike added concentrations by a factor of four or more and can not be reliably calculated.

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

Reporting limits are adjusted for sample size and matrix interference.

Report Approvals:

Richard McMillin
Region 6 Laboratory Manager

David Neleigh
Region 6 Laboratory Branch Chief



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: Explo

Project Number: 13RCRA092

Data Management Coordinator: Christy Warren

Data Management Coordinator Signature

Date

Date Transmitted: ____/____/____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

Signature

Date

Please provide a reason for holding:



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
1	1304030-01	Solid	4/17/13 10:40	04/18/13 09:45
2	1304030-02	Solid	4/17/13 11:15	04/18/13 09:45
3	1304030-03	Solid	4/17/13 14:15	04/18/13 09:45
4	1304030-04	Solid	4/17/13 14:45	04/18/13 09:45
5	1304030-05	Solid	4/17/13 15:00	04/18/13 09:45
8	1304030-06	Solid	4/17/13 14:25	04/18/13 09:45
6	1304031-01	Solid	4/18/13 9:25	04/19/13 12:00
7	1304031-02	Solid	4/18/13 9:35	04/19/13 12:00
9	1304031-03	Liquid	4/18/13 10:50	04/19/13 12:00



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-01

Station ID: 1

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.252g

%Solids: 76.03

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	5,030		52.3	38-101	04/24/13	04/25/13
Phenol-d5	6,200		64.5	42-105	"	"
2-Chlorophenol-d4	5,380		55.9	40-100	"	"
1,2-Dichlorobenzene-d4	2,750		42.8	37-100	"	"
Nitrobenzene-d5	3,950		61.6	42-108	"	"
2-Fluorobiphenyl	4,870		75.9	51-103	"	"
2,4,6-Tribromophenol	10,300		108	55-115	"	"
Terphenyl-d14	5,410		84.3	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		642	1	04/24/13	04/25/13
Phenol (108-95-2)	U		642	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		642	"	"	"
2-Chlorophenol (95-57-8)	U		642	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		642	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		642	"	"	"
Benzyl alcohol (100-51-6)	U		642	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		642	"	"	"
2-Methylphenol (95-48-7)	U		642	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		642	"	"	"
Acetophenone (98-86-2)	U		642	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		642	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		642	"	"	"
Hexachloroethane (67-72-1)	U		642	"	"	"
Nitrobenzene (98-95-3)	U		642	"	"	"
Isophorone (78-59-1)	U		642	"	"	"
2-Nitrophenol (88-75-5)	U		642	"	"	"
2,4-Dimethylphenol (105-67-9)	U		642	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		642	"	"	"
Benzoic acid (65-85-0)	U		1,280	"	"	"
2,4-Dichlorophenol (120-83-2)	U		642	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		642	"	"	"
Naphthalene (91-20-3)	U		257	"	"	"
4-Chloroaniline (106-47-8)	U		642	"	"	"



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-01

Station ID: 1

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.252g

%Solids: 76.03

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U		642	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		642	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		642	"	"	"
2-Methylnaphthalene (91-57-6)	U		257	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		642	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		642	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		642	"	"	"
2-Chloronaphthalene (91-58-7)	U		642	"	"	"
1,1'-Biphenyl (92-52-4)	U		642	"	"	"
2-Nitroaniline (88-74-4)	U		1,030	"	"	"
Dimethyl phthalate (131-11-3)	U		642	"	"	"
Acenaphthylene (208-96-8)	U		257	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		642	"	"	"
3-Nitroaniline (99-09-2)	U		1,030	"	"	"
Acenaphthene (83-32-9)	U		257	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,570	"	"	"
4-Nitrophenol (100-02-7)	U		1,670	"	"	"
Dibenzofuran (132-64-9)	U		642	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		642	"	"	"
Fluorene (86-73-7)	U		257	"	"	"
Diethyl phthalate (84-66-2)	U		642	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		642	"	"	"
4-Nitroaniline (100-01-6)	U		1,030	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,570	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		642	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		642	"	"	"
Hexachlorobenzene (118-74-1)	U		642	"	"	"
Atrazine (1912-24-9)	U		642	"	"	"
Pentachlorophenol (87-86-5)	U		642	"	"	"
Phenanthrene (85-01-8)	U		257	"	"	"
Anthracene (120-12-7)	U		257	"	"	"
Carbazole (86-74-8)	U		642	"	"	"
Di-n-butyl phthalate (84-74-2)	U		642	"	"	"
Fluoranthene (206-44-0)	U		257	"	"	"
Pyrene (129-00-0)	U		257	"	"	"
Butyl benzyl phthalate (85-68-7)	U		642	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-01

Station ID: 1

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.252g

%Solids: 76.03

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		642	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U	R	642	"	"	"
Chrysene (218-01-9)	U		642	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		642	"	"	"
Di-n-octyl phthalate (117-84-0)	U		642	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		642	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		642	"	"	"
Benzo (a) pyrene (50-32-8)	U		642	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		642	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		642	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		642	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-01

Station ID: 1

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.53g

Sample Qualifiers:

%Solids: 76.03

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,700		12.4	1	04/29/13	05/16/13
Barium (7440-39-3)	293	J	1.2	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	0.6		0.6	"	"	"
Calcium (7440-70-2)	1,620		18.6	"	"	"
Chromium (7440-47-3)	11.1		1.2	"	"	"
Cobalt (7440-48-4)	U		2.5	"	"	"
Copper (7440-50-8)	9.5		2.5	"	"	"
Iron (7439-89-6)	5,710		3.1	"	"	"
Magnesium (7439-95-4)	226		18.6	"	"	"
Manganese (7439-96-5)	137	J	0.6	"	"	"
Nickel (7440-02-2)	2.8		2.5	"	"	"
Potassium (7440-09-7)	366		124	"	"	"
Silver (7440-22-4)	U		1.2	"	"	"
Sodium (7440-23-5)	255		62.0	"	"	"
Vanadium (7440-62-2)	11.5		2.5	"	"	"
Zinc (7440-66-6)	116	J	2.5	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-01

Station ID: 1

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.177g

Sample Qualifiers:

%Solids: 76.03

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.05	1	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-01

Station ID: 1

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.53g

%Solids: 76.03

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	0.7	J	0.6	10	04/29/13	05/01/13
Arsenic (7440-38-2)	6.5		0.6	"	"	"
Lead (7439-92-1)	56.6	J	0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-02

Station ID: 2

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.203g

%Solids: 84.45

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	4,330		49.7	38-101	04/24/13	04/25/13
Phenol-d5	5,660		65.1	42-105	"	"
2-Chlorophenol-d4	4,670		53.6	40-100	"	"
1,2-Dichlorobenzene-d4	2,050		35.4 #	37-100	"	"
Nitrobenzene-d5	3,350		57.8	42-108	"	"
2-Fluorobiphenyl	4,380		75.5	51-103	"	"
2,4,6-Tribromophenol	9,090		104	55-115	"	"
Terphenyl-d14	5,160		89.0	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		580	1	04/24/13	04/25/13
Phenol (108-95-2)	U		580	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		580	"	"	"
2-Chlorophenol (95-57-8)	U		580	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	1,740	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	1,740	"	"	"
Benzyl alcohol (100-51-6)	U		580	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	1,740	"	"	"
2-Methylphenol (95-48-7)	U		580	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		580	"	"	"
Acetophenone (98-86-2)	U		580	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		580	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		580	"	"	"
Hexachloroethane (67-72-1)	U	RL	1,740	"	"	"
Nitrobenzene (98-95-3)	U		580	"	"	"
Isophorone (78-59-1)	U		580	"	"	"
2-Nitrophenol (88-75-5)	U		580	"	"	"
2,4-Dimethylphenol (105-67-9)	U		580	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		580	"	"	"
Benzoic acid (65-85-0)	U		1,160	"	"	"
2,4-Dichlorophenol (120-83-2)	U		580	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	1,740	"	"	"
Naphthalene (91-20-3)	U		232	"	"	"
4-Chloroaniline (106-47-8)	U		580	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-02

Station ID: 2

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.203g

%Solids: 84.45

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U	RL	1,740	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		580	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		580	"	"	"
2-Methylnaphthalene (91-57-6)	U		232	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		580	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		580	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		580	"	"	"
2-Chloronaphthalene (91-58-7)	U		580	"	"	"
1,1'-Biphenyl (92-52-4)	U		580	"	"	"
2-Nitroaniline (88-74-4)	U		928	"	"	"
Dimethyl phthalate (131-11-3)	U		580	"	"	"
Acenaphthylene (208-96-8)	U		232	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		580	"	"	"
3-Nitroaniline (99-09-2)	U		928	"	"	"
Acenaphthene (83-32-9)	U		232	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,320	"	"	"
4-Nitrophenol (100-02-7)	U		1,510	"	"	"
Dibenzofuran (132-64-9)	U		580	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		580	"	"	"
Fluorene (86-73-7)	U		232	"	"	"
Diethyl phthalate (84-66-2)	U		580	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		580	"	"	"
4-Nitroaniline (100-01-6)	U		928	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,320	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		580	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		580	"	"	"
Hexachlorobenzene (118-74-1)	U		580	"	"	"
Atrazine (1912-24-9)	U		580	"	"	"
Pentachlorophenol (87-86-5)	U		580	"	"	"
Phenanthrene (85-01-8)	U		232	"	"	"
Anthracene (120-12-7)	U		232	"	"	"
Carbazole (86-74-8)	U		580	"	"	"
Di-n-butyl phthalate (84-74-2)	U		580	"	"	"
Fluoranthene (206-44-0)	U		232	"	"	"
Pyrene (129-00-0)	U		232	"	"	"
Butyl benzyl phthalate (85-68-7)	U		580	"	"	"



Environmental Protection Agency
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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-02

Station ID: 2

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.203g

Sample Qualifiers:

%Solids: 84.45

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		580	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		580	"	"	"
Chrysene (218-01-9)	U		580	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		580	"	"	"
Di-n-octyl phthalate (117-84-0)	U		580	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		580	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		580	"	"	"
Benzo (a) pyrene (50-32-8)	U		580	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		580	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		580	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		580	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-02

Station ID: 2

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.508g

%Solids: 84.45

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	8,150		11.7	1	04/29/13	05/16/13
Barium (7440-39-3)	69.4		1.2	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	1.3		0.6	"	"	"
Calcium (7440-70-2)	2,150		17.5	"	"	"
Chromium (7440-47-3)	22.2		1.2	"	"	"
Cobalt (7440-48-4)	4.4		2.3	"	"	"
Copper (7440-50-8)	131		2.3	"	"	"
Iron (7439-89-6)	9,560		2.9	"	"	"
Magnesium (7439-95-4)	383		17.5	"	"	"
Manganese (7439-96-5)	183		0.6	"	"	"
Nickel (7440-02-2)	25.5		2.3	"	"	"
Potassium (7440-09-7)	601		117	"	"	"
Silver (7440-22-4)	U		1.2	"	"	"
Sodium (7440-23-5)	67.6		58.3	"	"	"
Vanadium (7440-62-2)	19.6		2.3	"	"	"
Zinc (7440-66-6)	127		2.3	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-02

Station ID: 2

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.103g

%Solids: 84.45

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.07	1	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-02

Station ID: 2

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.508g

%Solids: 84.45

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	04/29/13	05/01/13
Arsenic (7440-38-2)	3.0		0.6	"	"	"
Lead (7439-92-1)	110		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-03

Station ID: 3

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.247g

%Solids: 75.20

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	4,800		49.3	38-101	04/24/13	04/25/13
Phenol-d5	6,220		63.9	42-105	"	"
2-Chlorophenol-d4	5,280		54.2	40-100	"	"
1,2-Dichlorobenzene-d4	2,410		37.1	37-100	"	"
Nitrobenzene-d5	3,650		56.2	42-108	"	"
2-Fluorobiphenyl	5,150		79.3	51-103	"	"
2,4,6-Tribromophenol	9,950		102	55-115	"	"
Terphenyl-d14	5,670		87.3	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		649	1	04/24/13	04/25/13
Phenol (108-95-2)	U		649	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		649	"	"	"
2-Chlorophenol (95-57-8)	U		649	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		649	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		649	"	"	"
Benzyl alcohol (100-51-6)	U		649	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		649	"	"	"
2-Methylphenol (95-48-7)	U		649	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		649	"	"	"
Acetophenone (98-86-2)	U		649	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		649	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		649	"	"	"
Hexachloroethane (67-72-1)	U		649	"	"	"
Nitrobenzene (98-95-3)	U		649	"	"	"
Isophorone (78-59-1)	U		649	"	"	"
2-Nitrophenol (88-75-5)	U		649	"	"	"
2,4-Dimethylphenol (105-67-9)	U		649	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		649	"	"	"
Benzoic acid (65-85-0)	U		1,300	"	"	"
2,4-Dichlorophenol (120-83-2)	U		649	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		649	"	"	"
Naphthalene (91-20-3)	U		260	"	"	"
4-Chloroaniline (106-47-8)	U		649	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-03

Station ID: 3

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.247g

%Solids: 75.20

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U		649	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		649	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		649	"	"	"
2-Methylnaphthalene (91-57-6)	U		260	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		649	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		649	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		649	"	"	"
2-Chloronaphthalene (91-58-7)	U		649	"	"	"
1,1'-Biphenyl (92-52-4)	U		649	"	"	"
2-Nitroaniline (88-74-4)	U		1,040	"	"	"
Dimethyl phthalate (131-11-3)	U		649	"	"	"
Acenaphthylene (208-96-8)	U		260	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		649	"	"	"
3-Nitroaniline (99-09-2)	U		1,040	"	"	"
Acenaphthene (83-32-9)	U		260	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,600	"	"	"
4-Nitrophenol (100-02-7)	U		1,690	"	"	"
Dibenzofuran (132-64-9)	U		649	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		649	"	"	"
Fluorene (86-73-7)	U		260	"	"	"
Diethyl phthalate (84-66-2)	U		649	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		649	"	"	"
4-Nitroaniline (100-01-6)	U		1,040	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,600	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		649	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		649	"	"	"
Hexachlorobenzene (118-74-1)	U		649	"	"	"
Atrazine (1912-24-9)	U		649	"	"	"
Pentachlorophenol (87-86-5)	U		649	"	"	"
Phenanthrene (85-01-8)	U		260	"	"	"
Anthracene (120-12-7)	U		260	"	"	"
Carbazole (86-74-8)	U		649	"	"	"
Di-n-butyl phthalate (84-74-2)	U		649	"	"	"
Fluoranthene (206-44-0)	U		260	"	"	"
Pyrene (129-00-0)	U		260	"	"	"
Butyl benzyl phthalate (85-68-7)	U		649	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Phone:(281)983-2100 Fax:(281)983-2248

Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-03

Station ID: 3

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.247g

%Solids: 75.20

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		649	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		649	"	"	"
Chrysene (218-01-9)	U		649	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		649	"	"	"
Di-n-octyl phthalate (117-84-0)	U		649	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		649	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		649	"	"	"
Benzo (a) pyrene (50-32-8)	U		649	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		649	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		649	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		649	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-03

Station ID: 3

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.52g

%Solids: 75.20

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	7,820		12.8	1	04/29/13	05/16/13
Barium (7440-39-3)	1,200		1.3	"	"	"
Beryllium (7440-41-7)	0.6		0.6	"	"	"
Cadmium (7440-43-9)	2.4		0.6	"	"	"
Calcium (7440-70-2)	6,940		19.2	"	"	"
Chromium (7440-47-3)	17.2		1.3	"	"	"
Cobalt (7440-48-4)	4.3		2.6	"	"	"
Copper (7440-50-8)	18.3		2.6	"	"	"
Iron (7439-89-6)	15,500		3.2	"	"	"
Magnesium (7439-95-4)	985		19.2	"	"	"
Manganese (7439-96-5)	450		0.6	"	"	"
Nickel (7440-02-2)	6.7		2.6	"	"	"
Potassium (7440-09-7)	1,630		128	"	"	"
Silver (7440-22-4)	U		1.3	"	"	"
Sodium (7440-23-5)	69.5		63.9	"	"	"
Vanadium (7440-62-2)	28.6		2.6	"	"	"
Zinc (7440-66-6)	128		2.6	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-03

Station ID: 3

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.124g

%Solids: 75.20

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	0.1		0.07	1	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-03

Station ID: 3

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.52g

% Solids: 75.20

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	04/29/13	05/01/13
Arsenic (7440-38-2)	8.0		0.6	"	"	"
Lead (7439-92-1)	67.3		0.6	"	"	"
Selenium (7782-49-2)	U		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-04

Station ID: 4

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.76g

%Solids: 64.68

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	5,690		52.8	38-101	04/24/13	04/25/13
Phenol-d5	7,100		65.9	42-105	"	"
2-Chlorophenol-d4	6,060		56.2	40-100	"	"
1,2-Dichlorobenzene-d4	2,470		34.4 #	37-100	"	"
Nitrobenzene-d5	3,860		53.7	42-108	"	"
2-Fluorobiphenyl	5,720		79.6	51-103	"	"
2,4,6-Tribromophenol	9,750		90.5	55-115	"	"
Terphenyl-d14	6,340		88.2	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		718	1	04/24/13	04/25/13
Phenol (108-95-2)	U		718	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		718	"	"	"
2-Chlorophenol (95-57-8)	U		718	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	2,160	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	2,160	"	"	"
Benzyl alcohol (100-51-6)	U		718	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	2,160	"	"	"
2-Methylphenol (95-48-7)	U		718	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		718	"	"	"
Acetophenone (98-86-2)	U		718	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		718	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		718	"	"	"
Hexachloroethane (67-72-1)	U	RL	2,160	"	"	"
Nitrobenzene (98-95-3)	U		718	"	"	"
Isophorone (78-59-1)	U		718	"	"	"
2-Nitrophenol (88-75-5)	U		718	"	"	"
2,4-Dimethylphenol (105-67-9)	U		718	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		718	"	"	"
Benzoic acid (65-85-0)	U		1,440	"	"	"
2,4-Dichlorophenol (120-83-2)	U		718	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	2,160	"	"	"
Naphthalene (91-20-3)	U		287	"	"	"
4-Chloroaniline (106-47-8)	U		718	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-04

Station ID: 4

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.76g

%Solids: 64.68

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U	RL	2,160	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		718	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		718	"	"	"
2-Methylnaphthalene (91-57-6)	U		287	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		718	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		718	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		718	"	"	"
2-Chloronaphthalene (91-58-7)	U		718	"	"	"
1,1'-Biphenyl (92-52-4)	U		718	"	"	"
2-Nitroaniline (88-74-4)	U		1,150	"	"	"
Dimethyl phthalate (131-11-3)	U		718	"	"	"
Acenaphthylene (208-96-8)	U		287	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		718	"	"	"
3-Nitroaniline (99-09-2)	U		1,150	"	"	"
Acenaphthene (83-32-9)	U		287	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,870	"	"	"
4-Nitrophenol (100-02-7)	U		1,870	"	"	"
Dibenzofuran (132-64-9)	U		718	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		718	"	"	"
Fluorene (86-73-7)	U		287	"	"	"
Diethyl phthalate (84-66-2)	U		718	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		718	"	"	"
4-Nitroaniline (100-01-6)	U		1,150	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,870	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		718	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		718	"	"	"
Hexachlorobenzene (118-74-1)	U		718	"	"	"
Atrazine (1912-24-9)	U		718	"	"	"
Pentachlorophenol (87-86-5)	U		718	"	"	"
Phenanthrene (85-01-8)	U		287	"	"	"
Anthracene (120-12-7)	U		287	"	"	"
Carbazole (86-74-8)	U		718	"	"	"
Di-n-butyl phthalate (84-74-2)	U		718	"	"	"
Fluoranthene (206-44-0)	U		287	"	"	"
Pyrene (129-00-0)	U		287	"	"	"
Butyl benzyl phthalate (85-68-7)	U		718	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-04

Station ID: 4

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.76g

Sample Qualifiers:

%Solids: 64.68

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		718	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		718	"	"	"
Chrysene (218-01-9)	U		718	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		718	"	"	"
Di-n-octyl phthalate (117-84-0)	U		718	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		718	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		718	"	"	"
Benzo (a) pyrene (50-32-8)	U		718	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		718	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		718	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		718	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-04

Station ID: 4

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.52g

%Solids: 64.68

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	7,430		14.9	1	04/29/13	05/16/13
Barium (7440-39-3)	75.1		1.5	"	"	"
Beryllium (7440-41-7)	U		0.7	"	"	"
Cadmium (7440-43-9)	0.8		0.7	"	"	"
Calcium (7440-70-2)	1,360		22.3	"	"	"
Chromium (7440-47-3)	14.1		1.5	"	"	"
Cobalt (7440-48-4)	U		3.0	"	"	"
Copper (7440-50-8)	27.4		3.0	"	"	"
Iron (7439-89-6)	9,840		3.7	"	"	"
Magnesium (7439-95-4)	451		22.3	"	"	"
Manganese (7439-96-5)	36.0		0.7	"	"	"
Nickel (7440-02-2)	3.6		3.0	"	"	"
Potassium (7440-09-7)	475		149	"	"	"
Silver (7440-22-4)	U		1.5	"	"	"
Sodium (7440-23-5)	U		74.3	"	"	"
Vanadium (7440-62-2)	22.3		3.0	"	"	"
Zinc (7440-66-6)	88.0		3.0	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-04

Station ID: 4

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.155g

%Solids: 64.68

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	0.2		0.06	1	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-04

Station ID: 4

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.52g

% Solids: 64.68

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.7	10	04/29/13	05/01/13
Arsenic (7440-38-2)	3.8		0.7	"	"	"
Lead (7439-92-1)	46.8		0.7	"	"	"
Selenium (7782-49-2)	U		0.7	"	"	"
Thallium (7440-28-0)	U		0.7	"	"	"

KD



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-05

Station ID: 5

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.071g

%Solids: 85.99

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	4,780		55.2	38-101	04/24/13	04/25/13
Phenol-d5	5,560		64.2	42-105	"	"
2-Chlorophenol-d4	4,990		57.7	40-100	"	"
1,2-Dichlorobenzene-d4	2,780		48.1	37-100	"	"
Nitrobenzene-d5	3,670		63.6	42-108	"	"
2-Fluorobiphenyl	4,430		76.7	51-103	"	"
2,4,6-Tribromophenol	8,580		99.1	55-115	"	"
Terphenyl-d14	5,210		90.3	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		577	1	04/24/13	04/25/13
Phenol (108-95-2)	U		577	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		577	"	"	"
2-Chlorophenol (95-57-8)	U		577	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		577	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		577	"	"	"
Benzyl alcohol (100-51-6)	U		577	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		577	"	"	"
2-Methylphenol (95-48-7)	U		577	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		577	"	"	"
Acetophenone (98-86-2)	U		577	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		577	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		577	"	"	"
Hexachloroethane (67-72-1)	U		577	"	"	"
Nitrobenzene (98-95-3)	U		577	"	"	"
Isophorone (78-59-1)	U		577	"	"	"
2-Nitrophenol (88-75-5)	U		577	"	"	"
2,4-Dimethylphenol (105-67-9)	U		577	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		577	"	"	"
Benzoic acid (65-85-0)	U		1,150	"	"	"
2,4-Dichlorophenol (120-83-2)	U		577	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		577	"	"	"
Naphthalene (91-20-3)	U		231	"	"	"
4-Chloroaniline (106-47-8)	U		577	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-05

Station ID: 5

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.071g

%Solids: 85.99

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U		577	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		577	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		577	"	"	"
2-Methylnaphthalene (91-57-6)	U		231	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		577	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		577	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		577	"	"	"
2-Chloronaphthalene (91-58-7)	U		577	"	"	"
1,1'-Biphenyl (92-52-4)	U		577	"	"	"
2-Nitroaniline (88-74-4)	U		924	"	"	"
Dimethyl phthalate (131-11-3)	U		577	"	"	"
Acenaphthylene (208-96-8)	U		231	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		577	"	"	"
3-Nitroaniline (99-09-2)	U		924	"	"	"
Acenaphthene (83-32-9)	U		231	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,310	"	"	"
4-Nitrophenol (100-02-7)	U		1,500	"	"	"
Dibenzofuran (132-64-9)	U		577	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		577	"	"	"
Fluorene (86-73-7)	U		231	"	"	"
Diethyl phthalate (84-66-2)	U		577	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		577	"	"	"
4-Nitroaniline (100-01-6)	U		924	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,310	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		577	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		577	"	"	"
Hexachlorobenzene (118-74-1)	U		577	"	"	"
Atrazine (1912-24-9)	U		577	"	"	"
Pentachlorophenol (87-86-5)	U		577	"	"	"
Phenanthrene (85-01-8)	258		231	"	"	"
Anthracene (120-12-7)	U		231	"	"	"
Carbazole (86-74-8)	U		577	"	"	"
Di-n-butyl phthalate (84-74-2)	660		577	"	"	"
Fluoranthene (206-44-0)	560		231	"	"	"
Pyrene (129-00-0)	627		231	"	"	"
Butyl benzyl phthalate (85-68-7)	U		577	"	"	"



Environmental Protection Agency
Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-05

Station ID: 5

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.071g

Sample Qualifiers:

%Solids: 85.99

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		577	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		577	"	"	"
Chrysene (218-01-9)	U		577	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	1,030		577	"	"	"
Di-n-octyl phthalate (117-84-0)	U		577	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		577	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		577	"	"	"
Benzo (a) pyrene (50-32-8)	U		577	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		577	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		577	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		577	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-05

Station ID: 5

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.582g

%Solids: 85.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	7,910		10.0	1	04/29/13	05/16/13
Barium (7440-39-3)	247		1.0	"	"	"
Beryllium (7440-41-7)	U		0.5	"	"	"
Cadmium (7440-43-9)	3.8		0.5	"	"	"
Calcium (7440-70-2)	1,000		15.0	"	"	"
Chromium (7440-47-3)	57.6		1.0	"	"	"
Cobalt (7440-48-4)	3.3		2.0	"	"	"
Copper (7440-50-8)	258		2.0	"	"	"
Iron (7439-89-6)	12,500		2.5	"	"	"
Magnesium (7439-95-4)	317		15.0	"	"	"
Manganese (7439-96-5)	114		0.5	"	"	"
Nickel (7440-02-2)	9.2		2.0	"	"	"
Potassium (7440-09-7)	221		99.9	"	"	"
Silver (7440-22-4)	U		1.0	"	"	"
Sodium (7440-23-5)	U		50.0	"	"	"
Vanadium (7440-62-2)	16.9		2.0	"	"	"
Zinc (7440-66-6)	720		2.0	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-05

Station ID: 5

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.115g

%Solids: 85.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	7.2		0.6	10	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-05

Station ID: 5

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.582g

% Solids: 85.99

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	2.0		0.5	10	04/29/13	05/01/13
Arsenic (7440-38-2)	6.7		0.5	"	"	"
Lead (7439-92-1)	963		0.5	"	"	"
Selenium (7782-49-2)	U		0.5	"	"	"
Thallium (7440-28-0)	U		0.5	"	"	"

KD



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Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-06

Station ID: 8

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.518g

%Solids: 72.82

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	4,650		47.5	38-101	04/24/13	04/25/13
Phenol-d5	5,740		58.6	42-105	"	"
2-Chlorophenol-d4	5,050		51.5	40-100	"	"
1,2-Dichlorobenzene-d4	2,320		35.5 #	37-100	"	"
Nitrobenzene-d5	3,350		51.3	42-108	"	"
2-Fluorobiphenyl	4,790		73.4	51-103	"	"
2,4,6-Tribromophenol	9,550		97.6	55-115	"	"
Terphenyl-d14	5,890		90.2	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		653	1	04/24/13	04/25/13
Phenol (108-95-2)	U		653	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		653	"	"	"
2-Chlorophenol (95-57-8)	U		653	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	1,960	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	1,960	"	"	"
Benzyl alcohol (100-51-6)	U		653	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	1,960	"	"	"
2-Methylphenol (95-48-7)	U		653	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		653	"	"	"
Acetophenone (98-86-2)	U		653	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		653	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		653	"	"	"
Hexachloroethane (67-72-1)	U	RL	1,960	"	"	"
Nitrobenzene (98-95-3)	U		653	"	"	"
Isophorone (78-59-1)	U		653	"	"	"
2-Nitrophenol (88-75-5)	U		653	"	"	"
2,4-Dimethylphenol (105-67-9)	U		653	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		653	"	"	"
Benzoic acid (65-85-0)	U		1,310	"	"	"
2,4-Dichlorophenol (120-83-2)	U		653	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	1,960	"	"	"
Naphthalene (91-20-3)	U		261	"	"	"
4-Chloroaniline (106-47-8)	U		653	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-06

Station ID: 8

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.518g

%Solids: 72.82

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U	RL	1,960	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		653	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		653	"	"	"
2-Methylnaphthalene (91-57-6)	U		261	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		653	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		653	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		653	"	"	"
2-Chloronaphthalene (91-58-7)	U		653	"	"	"
1,1'-Biphenyl (92-52-4)	U		653	"	"	"
2-Nitroaniline (88-74-4)	U		1,040	"	"	"
Dimethyl phthalate (131-11-3)	U		653	"	"	"
Acenaphthylene (208-96-8)	U		261	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		653	"	"	"
3-Nitroaniline (99-09-2)	U		1,040	"	"	"
Acenaphthene (83-32-9)	U		261	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,610	"	"	"
4-Nitrophenol (100-02-7)	U		1,700	"	"	"
Dibenzofuran (132-64-9)	U		653	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		653	"	"	"
Fluorene (86-73-7)	U		261	"	"	"
Diethyl phthalate (84-66-2)	U		653	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		653	"	"	"
4-Nitroaniline (100-01-6)	U		1,040	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,610	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		653	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		653	"	"	"
Hexachlorobenzene (118-74-1)	U		653	"	"	"
Atrazine (1912-24-9)	U		653	"	"	"
Pentachlorophenol (87-86-5)	U		653	"	"	"
Phenanthrene (85-01-8)	U		261	"	"	"
Anthracene (120-12-7)	U		261	"	"	"
Carbazole (86-74-8)	U		653	"	"	"
Di-n-butyl phthalate (84-74-2)	U		653	"	"	"
Fluoranthene (206-44-0)	U		261	"	"	"
Pyrene (129-00-0)	U		261	"	"	"
Butyl benzyl phthalate (85-68-7)	U		653	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304030-06

Station ID: 8

Batch: B3D2403

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 10.518g

%Solids: 72.82

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		653	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		653	"	"	"
Chrysene (218-01-9)	U		653	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		653	"	"	"
Di-n-octyl phthalate (117-84-0)	U		653	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		653	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		653	"	"	"
Benzo (a) pyrene (50-32-8)	U		653	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		653	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		653	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		653	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304030-06

Station ID: 8

Batch: B3D3007

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.533g

%Solids: 72.82

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	6,760		12.9	1	04/29/13	05/16/13
Barium (7440-39-3)	957		1.3	"	"	"
Beryllium (7440-41-7)	U		0.6	"	"	"
Cadmium (7440-43-9)	2.1		0.6	"	"	"
Calcium (7440-70-2)	4,280		19.3	"	"	"
Chromium (7440-47-3)	17.7		1.3	"	"	"
Cobalt (7440-48-4)	4.0		2.6	"	"	"
Copper (7440-50-8)	19.8		2.6	"	"	"
Iron (7439-89-6)	14,400		3.2	"	"	"
Magnesium (7439-95-4)	382		19.3	"	"	"
Manganese (7439-96-5)	339		0.6	"	"	"
Nickel (7440-02-2)	7.1		2.6	"	"	"
Potassium (7440-09-7)	1,410		129	"	"	"
Silver (7440-22-4)	U		1.3	"	"	"
Sodium (7440-23-5)	U		64.4	"	"	"
Vanadium (7440-62-2)	27.0		2.6	"	"	"
Zinc (7440-66-6)	155		2.6	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304030-06

Station ID: 8

Batch: B3E0101

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.12g

%Solids: 72.82

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	0.1		0.07	1	04/29/13	04/29/13

cj



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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304030-06

Station ID: 8

Batch: B3D3008

Date Collected: 04/17/13

Sample Type: Solid

Sample Wt: 0.533g

%Solids: 72.82

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.6	10	04/29/13	05/01/13
Arsenic (7440-38-2)	7.8		0.6	"	"	"
Lead (7439-92-1)	69.1		0.6	"	"	"
Selenium (7782-49-2)	0.6		0.6	"	"	"
Thallium (7440-28-0)	U		0.6	"	"	"

KD



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-01

Station ID: 6

Batch: B3D2403

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.538g

Sample Qualifiers:

%Solids: 92.48

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	3,840		49.9	38-101	04/24/13	04/25/13
Phenol-d5	4,530		58.9	42-105	"	"
2-Chlorophenol-d4	3,950		51.3	40-100	"	"
1,2-Dichlorobenzene-d4	1,830		35.6 #	37-100	"	"
Nitrobenzene-d5	2,780		54.3	42-108	"	"
2-Fluorobiphenyl	3,610		70.3	51-103	"	"
2,4,6-Tribromophenol	6,170		80.2	55-115	"	"
Terphenyl-d14	4,660		90.8	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		513	1	04/24/13	04/25/13
Phenol (108-95-2)	U		513	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		513	"	"	"
2-Chlorophenol (95-57-8)	U		513	"	"	"
1,3-Dichlorobenzene (541-73-1)	U	RL	1,540	"	"	"
1,4-Dichlorobenzene (106-46-7)	U	RL	1,540	"	"	"
Benzyl alcohol (100-51-6)	U		513	"	"	"
1,2-Dichlorobenzene (95-50-1)	U	RL	1,540	"	"	"
2-Methylphenol (95-48-7)	U		513	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		513	"	"	"
Acetophenone (98-86-2)	U		513	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		513	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		513	"	"	"
Hexachloroethane (67-72-1)	U	RL	1,540	"	"	"
Nitrobenzene (98-95-3)	U		513	"	"	"
Isophorone (78-59-1)	U		513	"	"	"
2-Nitrophenol (88-75-5)	U		513	"	"	"
2,4-Dimethylphenol (105-67-9)	U		513	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		513	"	"	"
Benzoic acid (65-85-0)	U		1,030	"	"	"
2,4-Dichlorophenol (120-83-2)	U		513	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U	RL	1,540	"	"	"
Naphthalene (91-20-3)	U		205	"	"	"
4-Chloroaniline (106-47-8)	U		513	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-01

Station ID: 6

Batch: B3D2403

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.538g

%Solids: 92.48

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U	RL	1,540	1	04/24/13	04/25/13
Caprolactam (105-60-2)	U		513	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		513	"	"	"
2-Methylnaphthalene (91-57-6)	U		205	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		513	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		513	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		513	"	"	"
2-Chloronaphthalene (91-58-7)	U		513	"	"	"
1,1'-Biphenyl (92-52-4)	U		513	"	"	"
2-Nitroaniline (88-74-4)	U		821	"	"	"
Dimethyl phthalate (131-11-3)	U		513	"	"	"
Acenaphthylene (208-96-8)	U		205	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		513	"	"	"
3-Nitroaniline (99-09-2)	U		821	"	"	"
Acenaphthene (83-32-9)	U		205	"	"	"
2,4-Dinitrophenol (51-28-5)	U		2,050	"	"	"
4-Nitrophenol (100-02-7)	U		1,330	"	"	"
Dibenzofuran (132-64-9)	U		513	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		513	"	"	"
Fluorene (86-73-7)	U		205	"	"	"
Diethyl phthalate (84-66-2)	U		513	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		513	"	"	"
4-Nitroaniline (100-01-6)	U		821	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		2,050	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		513	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		513	"	"	"
Hexachlorobenzene (118-74-1)	U		513	"	"	"
Atrazine (1912-24-9)	U		513	"	"	"
Pentachlorophenol (87-86-5)	U		513	"	"	"
Phenanthrene (85-01-8)	U		205	"	"	"
Anthracene (120-12-7)	U		205	"	"	"
Carbazole (86-74-8)	U		513	"	"	"
Di-n-butyl phthalate (84-74-2)	U		513	"	"	"
Fluoranthene (206-44-0)	U		205	"	"	"
Pyrene (129-00-0)	U		205	"	"	"
Butyl benzyl phthalate (85-68-7)	U		513	"	"	"



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Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-01

Station ID: 6

Batch: B3D2403

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.538g

%Solids: 92.48

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		513	1	04/24/13	04/25/13
3,3'-Dichlorobenzidine (91-94-1)	U		513	"	"	"
Chrysene (218-01-9)	U		513	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		513	"	"	"
Di-n-octyl phthalate (117-84-0)	U		513	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		513	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		513	"	"	"
Benzo (a) pyrene (50-32-8)	U		513	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		513	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		513	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		513	"	"	"

BJS



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Metals by EPA Method 6010 - ICP

Lab ID: 1304031-01

Station ID: 6

Batch: B3D3007

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.504g

%Solids: 92.48

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	3,590		10.7	1	04/29/13	05/16/13
Barium (7440-39-3)	192		1.1	"	"	"
Beryllium (7440-41-7)	U		0.5	"	"	"
Cadmium (7440-43-9)	U		0.5	"	"	"
Calcium (7440-70-2)	1,290		16.1	"	"	"
Chromium (7440-47-3)	5.3		1.1	"	"	"
Cobalt (7440-48-4)	2.2		2.1	"	"	"
Copper (7440-50-8)	2.5		2.1	"	"	"
Iron (7439-89-6)	5,450		2.7	"	"	"
Magnesium (7439-95-4)	420		16.1	"	"	"
Manganese (7439-96-5)	142		0.5	"	"	"
Nickel (7440-02-2)	2.4		2.1	"	"	"
Potassium (7440-09-7)	414		107	"	"	"
Silver (7440-22-4)	U		1.1	"	"	"
Sodium (7440-23-5)	U		53.6	"	"	"
Vanadium (7440-62-2)	11.2		2.1	"	"	"
Zinc (7440-66-6)	10.8		2.1	"	"	"

ts

Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304031-01

Station ID: 6

Batch: B3E0101

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.102g

%Solids: 92.48

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.07	1	04/29/13	04/29/13

cj



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Region 6 Laboratory

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304031-01

Station ID: 6

Batch: B3D3008

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.504g

%Solids: 92.48

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.5	10	04/29/13	05/01/13
Arsenic (7440-38-2)	5.2		0.5	"	"	"
Lead (7439-92-1)	7.2		0.5	"	"	"
Selenium (7782-49-2)	U		0.5	"	"	"
Thallium (7440-28-0)	U		0.5	"	"	"

KD

Metals by EPA Method 6010 - ICP

Lab ID: 1304031-02

Station ID: 7

Batch: B3D3007

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.524g

%Solids: 99.73

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	1,970		9.6	1	04/29/13	05/16/13
Barium (7440-39-3)	58.4		1.0	"	"	"
Beryllium (7440-41-7)	U		0.5	"	"	"
Cadmium (7440-43-9)	U		0.5	"	"	"
Calcium (7440-70-2)	749		14.4	"	"	"
Chromium (7440-47-3)	2.4		1.0	"	"	"
Cobalt (7440-48-4)	U		1.9	"	"	"
Copper (7440-50-8)	3.0		1.9	"	"	"
Iron (7439-89-6)	1,900		2.4	"	"	"
Magnesium (7439-95-4)	265		14.4	"	"	"
Manganese (7439-96-5)	40.1		0.5	"	"	"
Nickel (7440-02-2)	U		1.9	"	"	"
Potassium (7440-09-7)	144		95.7	"	"	"
Silver (7440-22-4)	1.4		1.0	"	"	"
Sodium (7440-23-5)	U		47.8	"	"	"
Vanadium (7440-62-2)	7.3		1.9	"	"	"
Zinc (7440-66-6)	17.2		1.9	"	"	"

ts



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Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304031-02

Station ID: 7

Batch: B3E0101

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.105g

%Solids: 99.73

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.06	1	04/29/13	04/29/13 cj

Metals by EPA Method 6020 - ICP MS

Lab ID: 1304031-02

Station ID: 7

Batch: B3D3008

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 0.524g

%Solids: 99.73

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result mg/Kg dry	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		0.5	10	04/29/13	05/01/13
Arsenic (7440-38-2)	0.6		0.5	"	"	"
Lead (7439-92-1)	5.2		0.5	"	"	"
Selenium (7782-49-2)	U		0.5	"	"	"
Thallium (7440-28-0)	U		0.5	"	"	"

KD



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-02RE1

Station ID: 7

Batch: B3D2504

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.056g

%Solids: 99.73

Sample Qualifiers:

Surrogates

Analyte	Result µg/kg (dry)	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	5,450		72.9	38-101	04/26/13	05/21/13
Phenol-d5	5,830		77.9	42-105	"	"
2-Chlorophenol-d4	5,240		70.1	40-100	"	"
1,2-Dichlorobenzene-d4	3,090		62.0	37-100	"	"
Nitrobenzene-d5	3,790		76.1	42-108	"	"
2-Fluorobiphenyl	4,120		82.6	51-103	"	"
2,4,6-Tribromophenol	6,890		92.1	55-115	"	"
Terphenyl-d14	4,430		88.9	55-125	"	"

Targets

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		499	1	04/26/13	05/21/13
Phenol (108-95-2)	U		499	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		499	"	"	"
2-Chlorophenol (95-57-8)	U		499	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		499	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		499	"	"	"
Benzyl alcohol (100-51-6)	U		499	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		499	"	"	"
2-Methylphenol (95-48-7)	U		499	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		499	"	"	"
Acetophenone (98-86-2)	U		499	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		499	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		499	"	"	"
Hexachloroethane (67-72-1)	U		499	"	"	"
Nitrobenzene (98-95-3)	U		499	"	"	"
Isophorone (78-59-1)	U		499	"	"	"
2-Nitrophenol (88-75-5)	U		499	"	"	"
2,4-Dimethylphenol (105-67-9)	U		499	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		499	"	"	"
Benzoic acid (65-85-0)	U		997	"	"	"
2,4-Dichlorophenol (120-83-2)	U		499	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		499	"	"	"
Naphthalene (91-20-3)	U		199	"	"	"
4-Chloroaniline (106-47-8)	U		499	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-02RE1

Station ID: 7

Batch: B3D2504

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.056g

%Solids: 99.73

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U		499	1	04/26/13	05/21/13
Caprolactam (105-60-2)	U		499	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		499	"	"	"
2-Methylnaphthalene (91-57-6)	U		199	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		499	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		499	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		499	"	"	"
2-Chloronaphthalene (91-58-7)	U		499	"	"	"
1,1'-Biphenyl (92-52-4)	U		499	"	"	"
2-Nitroaniline (88-74-4)	U		798	"	"	"
Dimethyl phthalate (131-11-3)	U		499	"	"	"
Acenaphthylene (208-96-8)	U		199	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		499	"	"	"
3-Nitroaniline (99-09-2)	U		798	"	"	"
Acenaphthene (83-32-9)	U		199	"	"	"
2,4-Dinitrophenol (51-28-5)	U		1,990	"	"	"
4-Nitrophenol (100-02-7)	U		1,300	"	"	"
Dibenzofuran (132-64-9)	U		499	"	"	"
2,4-Dinitrotoluene (121-14-2)	861		499	"	"	"
Fluorene (86-73-7)	U		199	"	"	"
Diethyl phthalate (84-66-2)	U		499	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		499	"	"	"
4-Nitroaniline (100-01-6)	U		798	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		1,990	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		499	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		499	"	"	"
Hexachlorobenzene (118-74-1)	U		499	"	"	"
Atrazine (1912-24-9)	U		499	"	"	"
Pentachlorophenol (87-86-5)	U		499	"	"	"
Phenanthrene (85-01-8)	U		199	"	"	"
Anthracene (120-12-7)	U		199	"	"	"
Carbazole (86-74-8)	U		499	"	"	"
Di-n-butyl phthalate (84-74-2)	652		499	"	"	"
Fluoranthene (206-44-0)	U		199	"	"	"
Pyrene (129-00-0)	U		199	"	"	"
Butyl benzyl phthalate (85-68-7)	U		499	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-02RE1

Station ID: 7

Batch: B3D2504

Date Collected: 04/18/13

Sample Type: Solid

Sample Wt: 10.056g

%Solids: 99.73

Sample Qualifiers:

Targets (Continued)

Analyte (CAS Number)	Result µg/kg (dry)	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		499	1	04/26/13	05/21/13
3,3'-Dichlorobenzidine (91-94-1)	U		499	"	"	"
Chrysene (218-01-9)	U		499	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		499	"	"	"
Di-n-octyl phthalate (117-84-0)	U		499	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		499	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		499	"	"	"
Benzo (a) pyrene (50-32-8)	U		499	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		499	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		499	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		499	"	"	"

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10625 Fallstone Road, Houston, TX 77099
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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-03

Station ID: 9

Batch: B3D2216

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 1019ml

Sample Qualifiers: A

Surrogates

Analyte	Result µg/L	Analyte Qualifiers	%Recovery	%Recovery Limits	Prepared	Analyzed
2-Fluorophenol	54.8		74.5	39-109	04/23/13	04/24/13
Phenol-d5	57.4		78.0	41-107	"	"
2-Chlorophenol-d4	56.5		76.8	45-104	"	"
1,2-Dichlorobenzene-d4	34.0		69.2	34-100	"	"
Nitrobenzene-d5	44.4		90.5	41-128	"	"
2-Fluorobiphenyl	44.7		91.0	46-108	"	"
2,4,6-Tribromophenol	72.9		99.0	51-143	"	"
Terphenyl-d14	47.4		96.6	60-133	"	"

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzaldehyde (100-52-7)	U		4.9	1	04/23/13	04/24/13
Phenol (108-95-2)	U		4.9	"	"	"
Bis(2-chloroethyl)ether (111-44-4)	U		4.9	"	"	"
2-Chlorophenol (95-57-8)	U		4.9	"	"	"
1,3-Dichlorobenzene (541-73-1)	U		4.9	"	"	"
1,4-Dichlorobenzene (106-46-7)	U		4.9	"	"	"
Benzyl alcohol (100-51-6)	U		4.9	"	"	"
1,2-Dichlorobenzene (95-50-1)	U		4.9	"	"	"
2-Methylphenol (95-48-7)	U		4.9	"	"	"
Bis(2-chloro-1-methylethyl)ether (108-60-1)	U		4.9	"	"	"
Acetophenone (98-86-2)	U		4.9	"	"	"
3 &/or 4-Methylphenol (106-44-5)	U		4.9	"	"	"
N-Nitrosodi-n-propylamine (621-64-7)	U		4.9	"	"	"
Hexachloroethane (67-72-1)	U		4.9	"	"	"
Nitrobenzene (98-95-3)	U		4.9	"	"	"
Isophorone (78-59-1)	U		4.9	"	"	"
2-Nitrophenol (88-75-5)	U		4.9	"	"	"
2,4-Dimethylphenol (105-67-9)	U		4.9	"	"	"
Bis(2-chloroethoxy)methane (111-91-1)	U		4.9	"	"	"
Benzoic acid (65-85-0)	U		9.8	"	"	"
2,4-Dichlorophenol (120-83-2)	U		4.9	"	"	"
1,2,4-Trichlorobenzene (120-82-1)	U		4.9	"	"	"
Naphthalene (91-20-3)	U		2.0	"	"	"
4-Chloroaniline (106-47-8)	U		4.9	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-03

Station ID: 9

Batch: B3D2216

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 1019ml

Sample Qualifiers: A

Targets (Continued)

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Hexachlorobutadiene (87-68-3)	U		4.9	1	04/23/13	04/24/13
Caprolactam (105-60-2)	U		4.9	"	"	"
4-Chloro-3-methylphenol (59-50-7)	U		4.9	"	"	"
2-Methylnaphthalene (91-57-6)	U		2.0	"	"	"
Hexachlorocyclopentadiene (77-47-4)	U		4.9	"	"	"
2,4,6-Trichlorophenol (88-06-2)	U		4.9	"	"	"
2,4,5-Trichlorophenol (95-95-4)	U		4.9	"	"	"
2-Chloronaphthalene (91-58-7)	U		4.9	"	"	"
1,1'-Biphenyl (92-52-4)	U		4.9	"	"	"
2-Nitroaniline (88-74-4)	U		7.9	"	"	"
Dimethyl phthalate (131-11-3)	U		4.9	"	"	"
Acenaphthylene (208-96-8)	U		2.0	"	"	"
2,6-Dinitrotoluene (606-20-2)	U		4.9	"	"	"
3-Nitroaniline (99-09-2)	U		7.9	"	"	"
Acenaphthene (83-32-9)	U		2.0	"	"	"
2,4-Dinitrophenol (51-28-5)	U		19.6	"	"	"
4-Nitrophenol (100-02-7)	U		12.8	"	"	"
Dibenzofuran (132-64-9)	U		4.9	"	"	"
2,4-Dinitrotoluene (121-14-2)	U		4.9	"	"	"
Fluorene (86-73-7)	U		2.0	"	"	"
Diethyl phthalate (84-66-2)	U		4.9	"	"	"
4-Chlorophenyl phenyl ether (7005-72-3)	U		4.9	"	"	"
4-Nitroaniline (100-01-6)	U		7.9	"	"	"
4,6-Dinitro-2-methylphenol (534-52-1)	U		19.6	"	"	"
N-Nitrosodiphenylamine (86-30-6)	U		4.9	"	"	"
4-Bromophenyl phenyl ether (101-55-3)	U		4.9	"	"	"
Hexachlorobenzene (118-74-1)	U		4.9	"	"	"
Atrazine (1912-24-9)	U		4.9	"	"	"
Pentachlorophenol (87-86-5)	U		4.9	"	"	"
Phenanthrene (85-01-8)	U		2.0	"	"	"
Anthracene (120-12-7)	U		2.0	"	"	"
Carbazole (86-74-8)	U		4.9	"	"	"
Di-n-butyl phthalate (84-74-2)	U		4.9	"	"	"
Fluoranthene (206-44-0)	U		2.0	"	"	"
Pyrene (129-00-0)	U		2.0	"	"	"
Butyl benzyl phthalate (85-68-7)	U		4.9	"	"	"



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Semivolatiles by EPA Method 8270 - GC/MS

Lab ID: 1304031-03

Station ID: 9

Batch: B3D2216

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 1019ml

Sample Qualifiers: A

Targets (Continued)

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Benzo (a) anthracene (56-55-3)	U		4.9	1	04/23/13	04/24/13
3,3'-Dichlorobenzidine (91-94-1)	U		4.9	"	"	"
Chrysene (218-01-9)	U		4.9	"	"	"
Bis(2-ethylhexyl)phthalate (117-81-7)	U		4.9	"	"	"
Di-n-octyl phthalate (117-84-0)	U		4.9	"	"	"
Benzo (b) fluoranthene (205-99-2)	U		4.9	"	"	"
Benzo (k) fluoranthene (207-08-9)	U		4.9	"	"	"
Benzo (a) pyrene (50-32-8)	U		4.9	"	"	"
Indeno (1,2,3-cd) pyrene (193-39-5)	U		4.9	"	"	"
Dibenz (a,h) anthracene (53-70-3)	U		4.9	"	"	"
Benzo (g,h,i) perylene (191-24-2)	U		4.9	"	"	"

BJS



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6010 - ICP

Lab ID: 1304031-03

Station ID: 9

Batch: B3D3005

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 50ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Aluminum (7429-90-5)	1,150	J	100	1	04/29/13	05/16/13
Barium (7440-39-3)	282		10.0	"	"	"
Beryllium (7440-41-7)	U		5.0	"	"	"
Cadmium (7440-43-9)	U		5.0	"	"	"
Calcium (7440-70-2)	13,300		150	"	"	"
Chromium (7440-47-3)	U		10.0	"	"	"
Cobalt (7440-48-4)	U		20.0	"	"	"
Copper (7440-50-8)	U		20.0	"	"	"
Iron (7439-89-6)	6,550	J	25.0	"	"	"
Magnesium (7439-95-4)	1,240		150	"	"	"
Manganese (7439-96-5)	304		5.0	"	"	"
Nickel (7440-02-2)	U		20.0	"	"	"
Potassium (7440-09-7)	15,400		1,000	"	"	"
Silver (7440-22-4)	U		10.0	"	"	"
Sodium (7440-23-5)	2,230		500	"	"	"
Vanadium (7440-62-2)	U		20.0	"	"	"
Zinc (7440-66-6)	U		20.0	"	"	"

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Metals by EPA Method 7470A/7471 - CVAAS

Lab ID: 1304031-03

Station ID: 9

Batch: B3E0102

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 25ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Mercury (7439-97-6)	U		0.200	1	04/29/13	04/29/13

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Region 6 Laboratory

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Metals by EPA Method 6020 - ICP MS

Lab ID: 1304031-03

Station ID: 9

Batch: B3D3006

Date Collected: 04/18/13

Sample Type: Liquid

Sample Vol: 50ml

Sample Qualifiers:

Targets

Analyte (CAS Number)	Result µg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Antimony (7440-36-0)	U		5.0	10	04/29/13	05/01/13
Arsenic (7440-38-2)	U		5.0	"	"	"
Lead (7439-92-1)	11.4		5.0	"	"	"
Selenium (7782-49-2)	U		5.0	"	"	"
Thallium (7440-28-0)	U		5.0	"	"	"

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Percent Solids - Quality Control

Duplicate (B3D2214-DUP1)

Source: 1304031-02

Prepared: 4/22/2013 Analyzed: 4/23/2013

Targets

ANALYTE	Result %	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	RPD RPD Limit
% Solids	99.75				99.73	0.02 20



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

Blank (B3D2216-BLK1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC Limits
2-Fluorophenol	54.8		75.0	73.1 39-109
Phenol-d5	56.1		75.0	74.8 41-107
2-Chlorophenol-d4	53.8		75.0	71.8 45-104
1,2-Dichlorobenzene-d4	28.3		50.0	56.6 34-100
Nitrobenzene-d5	39.7		50.0	79.4 41-128
2-Fluorobiphenyl	35.8		50.0	71.7 46-108
2,4,6-Tribromophenol	55.5		75.0	74.0 51-143
Terphenyl-d14	47.9		50.0	95.8 60-133

Blank (B3D2216-BLK1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit
Benzaldehyde	U	5.0
Phenol	U	5.0
Bis(2-chloroethyl)ether	U	5.0
2-Chlorophenol	U	5.0
1,3-Dichlorobenzene	U	5.0
1,4-Dichlorobenzene	U	5.0
Benzyl alcohol	U	5.0
1,2-Dichlorobenzene	U	5.0
2-Methylphenol	U	5.0
Bis(2-chloro-1-methylethyl)ether	U	5.0
Acetophenone	U	5.0
3 &/or 4-Methylphenol	U	5.0
N-Nitrosodi-n-propylamine	U	5.0
Hexachloroethane	U	5.0
Nitrobenzene	U	5.0
Isophorone	U	5.0



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

Blank (B3D2216-BLK1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit
2-Nitrophenol	U	5.0
2,4-Dimethylphenol	U	5.0
Bis(2-chloroethoxy)methane	U	5.0
Benzoic acid	U	10.0
2,4-Dichlorophenol	U	5.0
1,2,4-Trichlorobenzene	U	5.0
Naphthalene	U	2.0
4-Chloroaniline	U	5.0
Hexachlorobutadiene	U	5.0
Caprolactam	U	5.0
4-Chloro-3-methylphenol	U	5.0
2-Methylnaphthalene	U	2.0
Hexachlorocyclopentadiene	U	5.0
2,4,6-Trichlorophenol	U	5.0
2,4,5-Trichlorophenol	U	5.0
2-Chloronaphthalene	U	5.0
1,1'-Biphenyl	U	5.0
2-Nitroaniline	U	8.0
Dimethyl phthalate	U	5.0
Acenaphthylene	U	2.0
2,6-Dinitrotoluene	U	5.0
3-Nitroaniline	U	8.0
Acenaphthene	U	2.0
2,4-Dinitrophenol	U	20.0
4-Nitrophenol	U	13.0
Dibenzofuran	U	5.0
2,4-Dinitrotoluene	U	5.0
Fluorene	U	2.0
Diethyl phthalate	U	5.0
4-Chlorophenyl phenyl ether	U	5.0



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Batch: B3D2216

Sample Type: Liquid

Blank (B3D2216-BLK1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit
4-Nitroaniline	U	8.0
4,6-Dinitro-2-methylphenol	U	20.0
N-Nitrosodiphenylamine	U	5.0
4-Bromophenyl phenyl ether	U	5.0
Hexachlorobenzene	U	5.0
Atrazine	U	5.0
Pentachlorophenol	U	5.0
Phenanthrene	U	2.0
Anthracene	U	2.0
Carbazole	U	5.0
Di-n-butyl phthalate	U	5.0
Fluoranthene	U	2.0
Pyrene	U	2.0
Butyl benzyl phthalate	U	5.0
Benzo (a) anthracene	U	5.0
3,3'-Dichlorobenzidine	U	5.0
Chrysene	U	5.0
Bis(2-ethylhexyl)phthalate	U	5.0
Di-n-octyl phthalate	U	5.0
Benzo (b) fluoranthene	U	5.0
Benzo (k) fluoranthene	U	5.0
Benzo (a) pyrene	U	5.0
Indeno (1,2,3-cd) pyrene	U	5.0
Dibenz (a,h) anthracene	U	5.0
Benzo (g,h,i) perylene	U	5.0



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS (B3D2216-BS1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	64.6		75.0	86.1	39-109
Phenol-d5	66.5		75.0	88.6	41-107
2-Chlorophenol-d4	63.3		75.0	84.4	45-104
1,2-Dichlorobenzene-d4	35.0		50.0	70.1	34-100
Nitrobenzene-d5	46.6		50.0	93.2	41-128
2-Fluorobiphenyl	44.3		50.0	88.6	46-108
2,4,6-Tribromophenol	76.0		75.0	101	51-143
Terphenyl-d14	47.1		50.0	94.1	60-133

LCS (B3D2216-BS1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	%REC %REC	%REC Limits
Benzaldehyde	20.5		5.0	25.0	82.1	53-136
Phenol	22.4		5.0	25.0	89.6	62-115
Bis(2-chloroethyl)ether	23.1		5.0	25.0	92.5	62-125
2-Chlorophenol	22.9		5.0	25.0	91.6	66-115
1,3-Dichlorobenzene	14.9		5.0	25.0	59.6	36-100
1,4-Dichlorobenzene	15.8		5.0	25.0	63.2	36-100
Benzyl alcohol	24.1		5.0	25.0	96.2	67-119
1,2-Dichlorobenzene	16.8		5.0	25.0	67.2	48-100
2-Methylphenol	23.3		5.0	25.0	93.2	60-131
Bis(2-chloro-1-methylethyl)ether	22.7		5.0	25.0	90.8	51-138
Acetophenone	23.9		5.0	25.0	95.7	63-134
3 &/or 4-Methylphenol	23.3		5.0	25.0	93.1	57-136
N-Nitrosodi-n-propylamine	23.4		5.0	25.0	93.6	61-123
Hexachloroethane	13.5		5.0	25.0	53.9	24-100
Nitrobenzene	23.7		5.0	25.0	94.6	68-126
Isophorone	22.4		5.0	25.0	89.7	67-125



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS (B3D2216-BS1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers	Limit	Spike Level	%REC %REC	Limits
2-Nitrophenol	25.0		5.0	25.0	100	62-137
2,4-Dimethylphenol	21.8		5.0	25.0	87.0	48-136
Bis(2-chloroethoxy)methane	23.3		5.0	25.0	93.2	66-126
Benzoic acid	16.2		10.0	25.0	64.8	41-134
2,4-Dichlorophenol	23.9		5.0	25.0	95.8	69-125
1,2,4-Trichlorobenzene	20.2		5.0	25.0	80.9	40-100
Naphthalene	21.9		2.0	25.0	87.5	65-115
4-Chloroaniline	21.1		5.0	25.0	84.5	54-122
Hexachlorobutadiene	18.5		5.0	25.0	74.2	29-112
Caprolactam	21.7		5.0	25.0	86.9	56-124
4-Chloro-3-methylphenol	22.8		5.0	25.0	91.1	63-119
2-Methylnaphthalene	22.0		2.0	25.0	88.2	64-117
Hexachlorocyclopentadiene	21.8		5.0	25.0	87.0	32-122
2,4,6-Trichlorophenol	23.0		5.0	25.0	92.1	65-128
2,4,5-Trichlorophenol	24.0		5.0	25.0	95.9	68-127
2-Chloronaphthalene	23.5		5.0	25.0	93.9	62-122
1,1'-Biphenyl	23.6		5.0	25.0	94.4	60-129
2-Nitroaniline	23.9		8.0	25.0	95.7	65-126
Dimethyl phthalate	22.9		5.0	25.0	91.8	71-122
Acenaphthylene	22.7		2.0	25.0	90.8	70-121
2,6-Dinitrotoluene	23.8		5.0	25.0	95.3	68-128
3-Nitroaniline	21.9		8.0	25.0	87.6	57-136
Acenaphthene	22.4		2.0	25.0	89.5	61-116
2,4-Dinitrophenol	16.9		20.0	25.0	67.4	42-152
4-Nitrophenol	21.5		13.0	25.0	85.8	52-132
Dibenzofuran	23.4		5.0	25.0	93.8	67-123
2,4-Dinitrotoluene	24.1		5.0	25.0	96.3	61-121
Fluorene	22.6		2.0	25.0	90.4	65-129
Diethyl phthalate	22.4		5.0	25.0	89.7	72-124
4-Chlorophenyl phenyl ether	23.7		5.0	25.0	94.7	63-130



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS (B3D2216-BS1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
4-Nitroaniline	23.6	8.0	25.0	94.2 64-137
4,6-Dinitro-2-methylphenol	19.7	20.0	25.0	78.7 46-146
N-Nitrosodiphenylamine	23.7	5.0	25.0	94.8 66-125
4-Bromophenyl phenyl ether	24.6	5.0	25.0	98.5 64-123
Hexachlorobenzene	25.1	5.0	25.0	101 67-121
Atrazine	25.6	5.0	25.0	102 74-127
Pentachlorophenol	20.9	5.0	25.0	83.7 49-134
Phenanthrene	23.5	2.0	25.0	93.9 69-121
Anthracene	23.8	2.0	25.0	95.2 68-122
Carbazole	23.4	5.0	25.0	93.7 71-124
Di-n-butyl phthalate	24.4	5.0	25.0	97.7 75-136
Fluoranthene	22.8	2.0	25.0	91.4 74-123
Pyrene	25.7	2.0	25.0	103 58-134
Butyl benzyl phthalate	23.9	5.0	25.0	95.8 77-132
Benzo (a) anthracene	24.5	5.0	25.0	98.0 76-125
3,3'-Dichlorobenzidine	19.7	5.0	25.0	78.9 40-139
Chrysene	24.1	5.0	25.0	96.3 76-125
Bis(2-ethylhexyl)phthalate	23.9	5.0	25.0	95.5 79-138
Di-n-octyl phthalate	24.6	5.0	25.0	98.3 64-134
Benzo (b) fluoranthene	22.1	5.0	25.0	88.5 70-130
Benzo (k) fluoranthene	23.1	5.0	25.0	92.6 68-136
Benzo (a) pyrene	23.5	5.0	25.0	94.2 75-125
Indeno (1,2,3-cd) pyrene	25.4	5.0	25.0	102 65-143
Dibenz (a,h) anthracene	26.6	5.0	25.0	107 61-145
Benzo (g,h,i) perylene	22.4	5.0	25.0	89.7 67-142



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS Dup (B3D2216-BSD1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Surrogates

ANALYTE	Result µg/L	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	63.3		75.0	84.5	39-109
Phenol-d5	64.2		75.0	85.7	41-107
2-Chlorophenol-d4	62.1		75.0	82.8	45-104
1,2-Dichlorobenzene-d4	34.1		50.0	68.1	34-100
Nitrobenzene-d5	46.4		50.0	92.8	41-128
2-Fluorobiphenyl	45.0		50.0	90.0	46-108
2,4,6-Tribromophenol	77.3		75.0	103	51-143
Terphenyl-d14	43.6		50.0	87.2	60-133

LCS Dup (B3D2216-BSD1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit
Benzaldehyde	19.3		5.0	25.0		77.2	53-136	6.12	30
Phenol	21.7		5.0	25.0		86.8	62-115	3.20	30
Bis(2-chloroethyl)ether	22.2		5.0	25.0		88.8	62-125	4.11	30
2-Chlorophenol	22.1		5.0	25.0		88.4	66-115	3.61	30
1,3-Dichlorobenzene	14.4		5.0	25.0		57.6	36-100	3.53	30
1,4-Dichlorobenzene	15.0		5.0	25.0		60.1	36-100	5.03	30
Benzyl alcohol	23.3		5.0	25.0		93.4	67-119	3.01	30
1,2-Dichlorobenzene	16.1		5.0	25.0		64.2	48-100	4.51	30
2-Methylphenol	22.4		5.0	25.0		89.8	60-131	3.74	30
Bis(2-chloro-1-methylethyl)ether	22.6		5.0	25.0		90.2	51-138	0.66	30
Acetophenone	23.5		5.0	25.0		94.0	63-134	1.79	30
3 &/or 4-Methylphenol	22.7		5.0	25.0		90.9	57-136	2.42	30
N-Nitrosodi-n-propylamine	23.1		5.0	25.0		92.2	61-123	1.51	30
Hexachloroethane	12.4		5.0	25.0		49.7	24-100	8.14	30
Nitrobenzene	23.5		5.0	25.0		94.1	68-126	0.59	30
Isophorone	23.0		5.0	25.0		92.1	67-125	2.72	30



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS Dup (B3D2216-BSD1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit
2-Nitrophenol	24.6	5.0	25.0		98.5 62-137	1.55	30
2,4-Dimethylphenol	21.4	5.0	25.0		85.6 48-136	1.65	30
Bis(2-chloroethoxy)methane	23.4	5.0	25.0		93.5 66-126	0.34	30
Benzoic acid	19.6	10.0	25.0		78.5 41-134	19.1	30
2,4-Dichlorophenol	24.4	5.0	25.0		97.6 69-125	1.92	30
1,2,4-Trichlorobenzene	20.2	5.0	25.0		80.8 40-100	0.17	30
Naphthalene	21.1	2.0	25.0		84.4 65-115	3.56	30
4-Chloroaniline	21.0	5.0	25.0		84.1 54-122	0.43	30
Hexachlorobutadiene	17.8	5.0	25.0		71.1 29-112	4.22	30
Caprolactam	21.9	5.0	25.0		87.5 56-124	0.72	30
4-Chloro-3-methylphenol	23.5	5.0	25.0		94.1 63-119	3.30	30
2-Methylnaphthalene	22.3	2.0	25.0		89.2 64-117	1.11	30
Hexachlorocyclopentadiene	20.9	5.0	25.0		83.8 32-122	3.81	30
2,4,6-Trichlorophenol	23.6	5.0	25.0		94.4 65-128	2.44	30
2,4,5-Trichlorophenol	25.1	5.0	25.0		100 68-127	4.52	30
2-Chloronaphthalene	23.2	5.0	25.0		92.9 62-122	1.10	30
1,1'-Biphenyl	23.3	5.0	25.0		93.2 60-129	1.28	30
2-Nitroaniline	23.9	8.0	25.0		95.7 65-126	0.02	30
Dimethyl phthalate	22.7	5.0	25.0		90.8 71-122	1.12	30
Acenaphthylene	22.9	2.0	25.0		91.6 70-121	0.90	30
2,6-Dinitrotoluene	24.1	5.0	25.0		96.6 68-128	1.30	30
3-Nitroaniline	23.2	8.0	25.0		92.9 57-136	5.94	30
Acenaphthene	22.6	2.0	25.0		90.6 61-116	1.21	30
2,4-Dinitrophenol	20.9	20.0	25.0		83.5 42-152	21.3	30
4-Nitrophenol	22.5	13.0	25.0		90.2 52-132	4.93	30
Dibenzofuran	23.4	5.0	25.0		93.8 67-123	0.02	30
2,4-Dinitrotoluene	23.8	5.0	25.0		95.2 61-121	1.15	30
Fluorene	23.2	2.0	25.0		92.7 65-129	2.54	30
Diethyl phthalate	23.1	5.0	25.0		92.2 72-124	2.85	30
4-Chlorophenyl phenyl ether	24.3	5.0	25.0		97.1 63-130	2.51	30



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2216

Sample Type: Liquid

LCS Dup (B3D2216-BSD1)

Prepared: 4/23/2013 Analyzed: 4/24/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD Limit
4-Nitroaniline	25.9	8.0	25.0		103 64-137	9.31 30
4,6-Dinitro-2-methylphenol	21.7	20.0	25.0		86.8 46-146	9.70 30
N-Nitrosodiphenylamine	24.5	5.0	25.0		98.1 66-125	3.43 30
4-Bromophenyl phenyl ether	25.4	5.0	25.0		102 64-123	3.02 30
Hexachlorobenzene	24.9	5.0	25.0		99.8 67-121	0.78 30
Atrazine	25.4	5.0	25.0		101 74-127	0.78 30
Pentachlorophenol	23.7	5.0	25.0		94.9 49-134	12.6 30
Phenanthrene	23.2	2.0	25.0		92.7 69-121	1.30 30
Anthracene	23.6	2.0	25.0		94.3 68-122	0.93 30
Carbazole	23.7	5.0	25.0		94.7 71-124	1.11 30
Di-n-butyl phthalate	24.4	5.0	25.0		97.5 75-136	0.14 30
Fluoranthene	23.1	2.0	25.0		92.5 74-123	1.19 30
Pyrene	23.5	2.0	25.0		93.9 58-134	9.01 30
Butyl benzyl phthalate	23.1	5.0	25.0		92.3 77-132	3.70 30
Benzo (a) anthracene	24.4	5.0	25.0		97.5 76-125	0.53 30
3,3'-Dichlorobenzidine	18.5	5.0	25.0		74.0 40-139	6.47 30
Chrysene	23.7	5.0	25.0		94.7 76-125	1.68 30
Bis(2-ethylhexyl)phthalate	23.0	5.0	25.0		92.1 79-138	3.65 30
Di-n-octyl phthalate	24.6	5.0	25.0		98.5 64-134	0.22 30
Benzo (b) fluoranthene	23.6	5.0	25.0		94.5 70-130	6.50 30
Benzo (k) fluoranthene	24.0	5.0	25.0		96.0 68-136	3.69 30
Benzo (a) pyrene	23.9	5.0	25.0		95.4 75-125	1.32 30
Indeno (1,2,3-cd) pyrene	22.8	5.0	25.0		91.2 65-143	10.9 30
Dibenz (a,h) anthracene	24.0	5.0	25.0		96.0 61-145	10.4 30
Benzo (g,h,i) perylene	20.2	5.0	25.0		80.6 67-142	10.7 30



Environmental Protection Agency
Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Blank (B3D2403-BLK1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	3,470		7,470	46.4	38-101
Phenol-d5	3,950		7,470	52.9	42-105
2-Chlorophenol-d4	3,470		7,470	46.4	40-100
1,2-Dichlorobenzene-d4	2,060		4,980	41.3	37-100
Nitrobenzene-d5	2,500		4,980	50.2	42-108
2-Fluorobiphenyl	3,050		4,980	61.2	51-103
2,4,6-Tribromophenol	5,570		7,470	74.5	55-115
Terphenyl-d14	4,260		4,980	85.5	55-125

Blank (B3D2403-BLK1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
Benzaldehyde	U	498
Phenol	U	498
Bis(2-chloroethyl)ether	U	498
2-Chlorophenol	U	498
1,3-Dichlorobenzene	U	498
1,4-Dichlorobenzene	U	498
Benzyl alcohol	U	498
1,2-Dichlorobenzene	U	498
2-Methylphenol	U	498
Bis(2-chloro-1-methylethyl)ether	U	498
Acetophenone	U	498
3 &/or 4-Methylphenol	U	498
N-Nitrosodi-n-propylamine	U	498
Hexachloroethane	U	498
Nitrobenzene	U	498
Isophorone	U	498



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Blank (B3D2403-BLK1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
2-Nitrophenol	U	498
2,4-Dimethylphenol	U	498
Bis(2-chloroethoxy)methane	U	498
Benzoic acid	U	996
2,4-Dichlorophenol	U	498
1,2,4-Trichlorobenzene	U	498
Naphthalene	U	199
4-Chloroaniline	U	498
Hexachlorobutadiene	U	498
Caprolactam	U	498
4-Chloro-3-methylphenol	U	498
2-Methylnaphthalene	U	199
Hexachlorocyclopentadiene	U	498
2,4,6-Trichlorophenol	U	498
2,4,5-Trichlorophenol	U	498
2-Chloronaphthalene	U	498
1,1'-Biphenyl	U	498
2-Nitroaniline	U	797
Dimethyl phthalate	U	498
Acenaphthylene	U	199
2,6-Dinitrotoluene	U	498
3-Nitroaniline	U	797
Acenaphthene	U	199
2,4-Dinitrophenol	U	1,990
4-Nitrophenol	U	1,300
Dibenzofuran	U	498
2,4-Dinitrotoluene	U	498
Fluorene	U	199
Diethyl phthalate	U	498
4-Chlorophenyl phenyl ether	U	498



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Blank (B3D2403-BLK1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result μg/Kg dry	Analyte Reporting Qualifiers Limit
4-Nitroaniline	U	797
4,6-Dinitro-2-methylphenol	U	1,990
N-Nitrosodiphenylamine	U	498
4-Bromophenyl phenyl ether	U	498
Hexachlorobenzene	U	498
Atrazine	U	498
Pentachlorophenol	U	498
Phenanthrene	U	199
Anthracene	U	199
Carbazole	U	498
Di-n-butyl phthalate	U	498
Fluoranthene	U	199
Pyrene	U	199
Butyl benzyl phthalate	U	498
Benzo (a) anthracene	U	498
3,3'-Dichlorobenzidine	U	498
Chrysene	U	498
Bis(2-ethylhexyl)phthalate	U	498
Di-n-octyl phthalate	U	498
Benzo (b) fluoranthene	U	498
Benzo (k) fluoranthene	U	498
Benzo (a) pyrene	U	498
Indeno (1,2,3-cd) pyrene	U	498
Dibenz (a,h) anthracene	U	498
Benzo (g,h,i) perylene	U	498



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

LCS (B3D2403-BS1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	4,280		7,480	57.2	38-101
Phenol-d5	4,650		7,480	62.2	42-105
2-Chlorophenol-d4	4,210		7,480	56.2	40-100
1,2-Dichlorobenzene-d4	2,450		4,990	49.1	37-100
Nitrobenzene-d5	2,990		4,990	60.0	42-108
2-Fluorobiphenyl	3,430		4,990	68.7	51-103
2,4,6-Tribromophenol	6,210		7,480	83.1	55-115
Terphenyl-d14	3,920		4,990	78.6	55-125

LCS (B3D2403-BS1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	%REC %REC	%REC Limits
Benzaldehyde	1,580		499	4,990	31.7	30-100
Phenol	3,020		499	4,990	60.5	40-101
Bis(2-chloroethyl)ether	2,820		499	4,990	56.6	37-100
2-Chlorophenol	2,960		499	4,990	59.3	41-100
1,3-Dichlorobenzene	2,480		499	4,990	49.7	36-100
1,4-Dichlorobenzene	2,550		499	4,990	51.0	32-100
Benzyl alcohol	3,240		499	4,990	65.0	42-102
1,2-Dichlorobenzene	2,680		499	4,990	53.7	35-100
2-Methylphenol	3,100		499	4,990	62.2	44-100
Bis(2-chloro-1-methylethyl)ether	2,820		499	4,990	56.6	41-100
Acetophenone	2,970		499	4,990	59.5	42-100
3 &/or 4-Methylphenol	3,090		499	4,990	62.0	45-100
N-Nitrosodi-n-propylamine	2,990		499	4,990	59.9	43-100
Hexachloroethane	2,530		499	4,990	50.7	35-100
Nitrobenzene	2,980		499	4,990	59.7	43-100
Isophorone	2,940		499	4,990	59.0	47-100



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

LCS (B3D2403-BS1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
2-Nitrophenol	3,200	499	4,990	64.2 46-101
2,4-Dimethylphenol	2,930	499	4,990	58.8 26-100
Bis(2-chloroethoxy)methane	3,130	499	4,990	62.8 47-100
Benzoic acid	1,820	998	4,990	36.6 10-125
2,4-Dichlorophenol	3,330	499	4,990	66.9 49-101
1,2,4-Trichlorobenzene	2,950	499	4,990	59.1 40-100
Naphthalene	2,980	200	4,990	59.8 44-100
4-Chloroaniline	2,770	499	4,990	55.6 37-100
Hexachlorobutadiene	2,890	499	4,990	58.0 42-101
Caprolactam	3,850	499	4,990	77.1 55-142
4-Chloro-3-methylphenol	3,490	499	4,990	70.0 47-114
2-Methylnaphthalene	3,070	200	4,990	61.5 47-101
Hexachlorocyclopentadiene	3,090	499	4,990	62.0 25-108
2,4,6-Trichlorophenol	3,420	499	4,990	68.6 48-105
2,4,5-Trichlorophenol	3,820	499	4,990	76.6 50-108
2-Chloronaphthalene	3,230	499	4,990	64.9 45-101
1,1'-Biphenyl	3,330	499	4,990	66.8 41-107
2-Nitroaniline	3,700	798	4,990	74.2 53-112
Dimethyl phthalate	3,590	499	4,990	72.0 53-111
Acenaphthylene	3,280	200	4,990	65.8 49-102
2,6-Dinitrotoluene	3,810	499	4,990	76.3 53-112
3-Nitroaniline	3,260	798	4,990	65.4 50-117
Acenaphthene	3,340	200	4,990	66.9 47-101
2,4-Dinitrophenol	3,030	2,000	4,990	60.7 13-127
4-Nitrophenol	3,460	1,300	4,990	69.4 47-130
Dibenzofuran	3,450	499	4,990	69.2 49-104
2,4-Dinitrotoluene	3,810	499	4,990	76.3 54-112
Fluorene	3,470	200	4,990	69.6 49-112
Diethyl phthalate	3,660	499	4,990	73.4 45-136
4-Chlorophenyl phenyl ether	3,540	499	4,990	71.0 47-113



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

LCS (B3D2403-BS1)

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
4-Nitroaniline	4,010	798	4,990	80.3 61-137
4,6-Dinitro-2-methylphenol	3,600	2,000	4,990	72.2 19-136
N-Nitrosodiphenylamine	3,830	499	4,990	76.8 53-112
4-Bromophenyl phenyl ether	3,760	499	4,990	75.4 50-109
Hexachlorobenzene	3,790	499	4,990	75.9 48-111
Atrazine	4,020	499	4,990	80.7 61-126
Pentachlorophenol	3,590	499	4,990	71.9 16-122
Phenanthrene	3,640	200	4,990	73.0 51-113
Anthracene	3,720	200	4,990	74.5 51-114
Carbazole	3,770	499	4,990	75.7 59-124
Di-n-butyl phthalate	3,820	499	4,990	76.5 57-139
Fluoranthene	3,670	200	4,990	73.5 58-120
Pyrene	3,970	200	4,990	79.5 51-119
Butyl benzyl phthalate	3,880	499	4,990	77.8 65-124
Benzo (a) anthracene	3,800	499	4,990	76.2 59-121
3,3'-Dichlorobenzidine	3,530	499	4,990	70.8 56-149
Chrysene	3,770	499	4,990	75.5 58-122
Bis(2-ethylhexyl)phthalate	3,760	499	4,990	75.4 59-146
Di-n-octyl phthalate	3,960	499	4,990	79.4 66-127
Benzo (b) fluoranthene	3,960	499	4,990	79.4 60-119
Benzo (k) fluoranthene	3,660	499	4,990	73.3 57-130
Benzo (a) pyrene	3,900	499	4,990	78.2 65-124
Indeno (1,2,3-cd) pyrene	3,780	499	4,990	75.7 61-137
Dibenz (a,h) anthracene	4,040	499	4,990	81.0 61-137
Benzo (g,h,i) perylene	3,130	499	4,990	62.7 54-139



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike (B3D2403-MS1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	5,240		9,690	54.1	38-101
Phenol-d5	6,160		9,690	63.5	42-105
2-Chlorophenol-d4	5,370		9,690	55.5	40-100
1,2-Dichlorobenzene-d4	2,840		6,460	44.0	37-100
Nitrobenzene-d5	3,990		6,460	61.8	42-108
2-Fluorobiphenyl	4,920		6,460	76.2	51-103
2,4,6-Tribromophenol	10,300		9,690	107	55-115
Terphenyl-d14	5,680		6,460	87.9	55-125

Matrix Spike (B3D2403-MS1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC	%REC Limits
Benzaldehyde	2,360		646	6,460		36.5	21-102
Phenol	4,020		646	6,460		62.3	32-96
Bis(2-chloroethyl)ether	3,330		646	6,460		51.5	31-104
2-Chlorophenol	3,770		646	6,460		58.3	28-94
1,3-Dichlorobenzene	2,830		646	6,460		43.8	38-95
1,4-Dichlorobenzene	2,900		646	6,460		44.8	27-83
Benzyl alcohol	4,360		646	6,460		67.6	44-106
1,2-Dichlorobenzene	3,170		646	6,460		49.1	39-97
2-Methylphenol	4,270		646	6,460		66.1	43-102
Bis(2-chloro-1-methylethyl)ether	3,490		646	6,460		54.1	36-102
Acetophenone	3,930		646	6,460		60.8	36-110
3 &/or 4-Methylphenol	4,390		646	6,460		68.0	46-106
N-Nitrosodi-n-propylamine	4,110		646	6,460		63.6	29-97
Hexachloroethane	2,920		646	6,460		45.3	36-96
Nitrobenzene	3,930		646	6,460		60.8	44-105
Isophorone	4,280		646	6,460		66.3	49-103



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike (B3D2403-MS1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits
2-Nitrophenol	4,400	646	6,460		68.2	44-114
2,4-Dimethylphenol	4,770	646	6,460		73.9	28-111
Bis(2-chloroethoxy)methane	4,230	646	6,460		65.4	48-103
Benzoic acid	3,890	1,290	6,460	516	52.2	10-115
2,4-Dichlorophenol	4,920	646	6,460		76.2	50-117
1,2,4-Trichlorobenzene	3,990	646	6,460		61.8	24-105
Naphthalene	4,050	258	6,460		62.7	46-102
4-Chloroaniline	2,910	646	6,460		45.0	35-102
Hexachlorobutadiene	3,850	646	6,460		59.6	47-102
Caprolactam	6,160	646	6,460		95.4	48-156
4-Chloro-3-methylphenol	5,570	646	6,460		86.2	38-126
2-Methylnaphthalene	4,520	258	6,460		70.0	50-105
Hexachlorocyclopentadiene	3,590	646	6,460		55.6	21-113
2,4,6-Trichlorophenol	5,670	646	6,460		87.8	48-113
2,4,5-Trichlorophenol	5,600	646	6,460		86.7	52-121
2-Chloronaphthalene	4,820	646	6,460		74.7	48-105
1,1'-Biphenyl	4,900	646	6,460		75.9	40-118
2-Nitroaniline	6,110	1,030	6,460		94.6	53-124
Dimethyl phthalate	5,570	646	6,460		86.3	56-117
Acenaphthylene	5,090	258	6,460		78.7	48-111
2,6-Dinitrotoluene	5,890	646	6,460	109	89.5	56-120
3-Nitroaniline	4,030	1,030	6,460		62.5	51-122
Acenaphthene	5,060	258	6,460		78.4	34-107
2,4-Dinitrophenol	5,940	2,580	6,460		92.0	10-129
4-Nitrophenol	5,540	1,680	6,460		85.7	35-138
Dibenzofuran	5,200	646	6,460		80.5	50-111
2,4-Dinitrotoluene	6,150	646	6,460	323	90.2	38-123
Fluorene	5,410	258	6,460		83.7	51-116
Diethyl phthalate	5,530	646	6,460		85.6	51-136
4-Chlorophenyl phenyl ether	5,450	646	6,460		84.4	48-119



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike (B3D2403-MS1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
4-Nitroaniline	5,080	1,030	6,460		78.6 62-140
4,6-Dinitro-2-methylphenol	6,010	2,580	6,460		93.1 10-130
N-Nitrosodiphenylamine	6,100	646	6,460		94.4 56-120
4-Bromophenyl phenyl ether	6,210	646	6,460		96.1 55-116
Hexachlorobenzene	6,020	646	6,460		93.2 55-116
Atrazine	5,910	646	6,460		91.4 63-133
Pentachlorophenol	4,840	646	6,460	68.1	73.8 10-126
Phenanthrene	5,920	258	6,460		91.6 52-121
Anthracene	5,120	258	6,460		79.3 53-123
Carbazole	4,940	646	6,460		76.5 61-133
Di-n-butyl phthalate	5,120	646	6,460		79.3 51-148
Fluoranthene	5,330	258	6,460		82.5 60-130
Pyrene	5,770	258	6,460		89.3 39-129
Butyl benzyl phthalate	5,550	646	6,460		85.9 59-140
Benzo (a) anthracene	5,980	646	6,460		92.6 58-129
3,3'-Dichlorobenzidine	44.3	646	6,460		0.686# 54-148
Chrysene	5,510	646	6,460		85.2 58-128
Bis(2-ethylhexyl)phthalate	5,550	646	6,460	254	82.0 56-153
Di-n-octyl phthalate	6,070	646	6,460		93.9 61-138
Benzo (b) fluoranthene	6,780	646	6,460		105 65-126
Benzo (k) fluoranthene	5,100	646	6,460		79.0 59-135
Benzo (a) pyrene	5,690	646	6,460		88.1 69-125
Indeno (1,2,3-cd) pyrene	3,970	646	6,460		61.4 # 62-133
Dibenz (a,h) anthracene	4,330	646	6,460		67.1 62-135
Benzo (g,h,i) perylene	3,100	646	6,460		48.0 # 50-137



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike Dup (B3D2403-MSD1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	5,440		9,780	55.6	38-101
Phenol-d5	6,270		9,780	64.1	42-105
2-Chlorophenol-d4	5,560		9,780	56.8	40-100
1,2-Dichlorobenzene-d4	3,020		6,520	46.2	37-100
Nitrobenzene-d5	4,040		6,520	61.9	42-108
2-Fluorobiphenyl	4,960		6,520	76.0	51-103
2,4,6-Tribromophenol	10,400		9,780	106	55-115
Terphenyl-d14	6,390		6,520	98.0	55-125

Matrix Spike Dup (B3D2403-MSD1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	%REC Limits	RPD RPD	RPD Limit
Benzaldehyde	2,660		652	6,520		40.7	21-102	12.0	30
Phenol	4,190		652	6,520		64.3	32-96	4.12	38
Bis(2-chloroethyl)ether	3,530		652	6,520		54.1	31-104	6.01	30
2-Chlorophenol	3,940		652	6,520		60.4	28-94	4.47	37
1,3-Dichlorobenzene	3,040		652	6,520		46.6	38-95	7.28	30
1,4-Dichlorobenzene	3,140		652	6,520		48.1	27-83	8.03	36
Benzyl alcohol	4,540		652	6,520		69.6	44-106	4.03	30
1,2-Dichlorobenzene	3,380		652	6,520		51.8	39-97	6.28	30
2-Methylphenol	4,450		652	6,520		68.2	43-102	4.04	30
Bis(2-chloro-1-methylethyl)ether	3,690		652	6,520		56.6	36-102	5.55	30
Acetophenone	4,120		652	6,520		63.2	36-110	4.77	30
3 &/or 4-Methylphenol	4,580		652	6,520		70.2	46-106	4.11	30
N-Nitrosodi-n-propylamine	4,260		652	6,520		65.4	29-97	3.73	33
Hexachloroethane	3,160		652	6,520		48.4	36-96	7.77	30
Nitrobenzene	4,080		652	6,520		62.5	44-105	3.73	30
Isophorone	4,400		652	6,520		67.5	49-103	2.77	30



Environmental Protection Agency
Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike Dup (B3D2403-MSD1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD Limit
2-Nitrophenol	4,570	652	6,520		70.0 44-114	3.60 30
2,4-Dimethylphenol	4,760	652	6,520		73.0 28-111	0.28 30
Bis(2-chloroethoxy)methane	4,390	652	6,520		67.3 48-103	3.85 30
Benzoic acid	4,290	1,300	6,520	516	57.9 10-115	9.83 30
2,4-Dichlorophenol	5,040	652	6,520		77.3 50-117	2.42 30
1,2,4-Trichlorobenzene	4,110	652	6,520		63.0 24-105	2.91 34
Naphthalene	4,230	261	6,520		64.9 46-102	4.36 30
4-Chloroaniline	2,870	652	6,520		44.0 35-102	1.35 30
Hexachlorobutadiene	3,960	652	6,520		60.7 47-102	2.81 30
Caprolactam	6,110	652	6,520		93.6 48-156	0.88 30
4-Chloro-3-methylphenol	5,640	652	6,520		86.4 38-126	1.23 36
2-Methylnaphthalene	4,670	261	6,520		71.6 50-105	3.16 30
Hexachlorocyclopentadiene	3,770	652	6,520		57.8 21-113	4.83 30
2,4,6-Trichlorophenol	5,770	652	6,520		88.4 48-113	1.71 30
2,4,5-Trichlorophenol	5,400	652	6,520		82.8 52-121	3.59 30
2-Chloronaphthalene	4,890	652	6,520		74.9 48-105	1.28 30
1,1'-Biphenyl	4,900	652	6,520		75.1 40-118	0.10 30
2-Nitroaniline	6,000	1,040	6,520		92.0 53-124	1.82 30
Dimethyl phthalate	5,450	652	6,520		83.5 56-117	2.31 30
Acenaphthylene	5,110	261	6,520		78.3 48-111	0.44 30
2,6-Dinitrotoluene	5,830	652	6,520	109	87.8 56-120	0.95 30
3-Nitroaniline	3,140	1,040	6,520		48.1 # 51-122	25.1 30
Acenaphthene	5,050	261	6,520		77.4 34-107	0.30 31
2,4-Dinitrophenol	6,080	2,610	6,520		93.1 10-129	2.20 30
4-Nitrophenol	5,320	1,700	6,520		81.6 35-138	3.97 39
Dibenzofuran	5,250	652	6,520		80.5 50-111	0.99 30
2,4-Dinitrotoluene	6,030	652	6,520	323	87.6 38-123	1.90 32
Fluorene	5,370	261	6,520		82.3 51-116	0.73 30
Diethyl phthalate	5,350	652	6,520		82.0 51-136	3.34 30
4-Chlorophenyl phenyl ether	5,450	652	6,520		83.5 48-119	0.05 30



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2403

Sample Type: Solid

Matrix Spike Dup (B3D2403-MSD1)

Source: 1304030-01

Prepared: 4/24/2013 Analyzed: 4/25/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit
4-Nitroaniline	4,620	1,040	6,520		70.8 62-140	9.43	30
4,6-Dinitro-2-methylphenol	6,590	2,610	6,520		101 10-130	9.07	30
N-Nitrosodiphenylamine	6,090	652	6,520		93.4 56-120	0.15	30
4-Bromophenyl phenyl ether	6,080	652	6,520		93.2 55-116	2.15	30
Hexachlorobenzene	5,850	652	6,520		89.6 55-116	2.92	30
Atrazine	5,550	652	6,520		85.0 63-133	6.27	30
Pentachlorophenol	4,680	652	6,520	68.1	70.7 10-126	3.25	45
Phenanthrene	5,710	261	6,520		87.6 52-121	3.55	30
Anthracene	4,980	261	6,520		76.4 53-123	2.76	30
Carbazole	4,360	652	6,520		66.8 61-133	12.5	30
Di-n-butyl phthalate	5,370	652	6,520		82.4 51-148	4.75	30
Fluoranthene	5,040	261	6,520		77.3 60-130	5.53	30
Pyrene	6,370	261	6,520		97.6 39-129	9.90	34
Butyl benzyl phthalate	5,760	652	6,520		88.2 59-140	3.64	30
Benzo (a) anthracene	5,830	652	6,520		89.4 58-129	2.53	30
3,3'-Dichlorobenzidine	U	652	6,520		NR # 54-148	NR #	30
Chrysene	5,540	652	6,520		84.9 58-128	0.59	30
Bis(2-ethylhexyl)phthalate	5,750	652	6,520	254	84.2 56-153	3.53	30
Di-n-octyl phthalate	5,860	652	6,520		89.8 61-138	3.46	30
Benzo (b) fluoranthene	5,810	652	6,520		89.1 65-126	15.4	30
Benzo (k) fluoranthene	5,540	652	6,520		84.9 59-135	8.25	30
Benzo (a) pyrene	5,450	652	6,520		83.5 69-125	4.43	30
Indeno (1,2,3-cd) pyrene	4,300	652	6,520		65.9 62-133	8.11	30
Dibenz (a,h) anthracene	4,770	652	6,520		73.1 62-135	9.52	30
Benzo (g,h,i) perylene	3,400	652	6,520		52.0 50-137	9.14	30



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC	%REC Limits
2-Fluorophenol	2,100		2,480	84.7	38-101
Phenol-d5	2,200		2,480	88.6	42-105
2-Chlorophenol-d4	1,990		2,480	80.3	40-100
1,2-Dichlorobenzene-d4	1,240		1,660	74.8	37-100
Nitrobenzene-d5	1,400		1,660	84.4	42-108
2-Fluorobiphenyl	1,530		1,660	92.2	51-103
2,4,6-Tribromophenol	2,650		2,480	107	55-115
Terphenyl-d14	1,770		1,660	107	55-125

Blank (B3D2504-BLK1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
Benzaldehyde	U	166
Phenol	U	166
Bis(2-chloroethyl)ether	U	166
2-Chlorophenol	U	166
1,3-Dichlorobenzene	U	166
1,4-Dichlorobenzene	U	166
Benzyl alcohol	U	166
1,2-Dichlorobenzene	U	166
2-Methylphenol	U	166
Bis(2-chloro-1-methylethyl)ether	U	166
Acetophenone	U	166
3 &/or 4-Methylphenol	U	166
N-Nitrosodi-n-propylamine	U	166
Hexachloroethane	U	166
Nitrobenzene	U	166
Isophorone	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
2-Nitrophenol	U	166
2,4-Dimethylphenol	U	166
Bis(2-chloroethoxy)methane	U	166
Benzoic acid	U	331
2,4-Dichlorophenol	U	166
1,2,4-Trichlorobenzene	U	166
Naphthalene	U	66.2
4-Chloroaniline	U	166
Hexachlorobutadiene	U	166
Caprolactam	U	166
4-Chloro-3-methylphenol	U	166
2-Methylnaphthalene	U	66.2
Hexachlorocyclopentadiene	U	166
2,4,6-Trichlorophenol	U	166
2,4,5-Trichlorophenol	U	166
2-Chloronaphthalene	U	166
1,1'-Biphenyl	U	166
2-Nitroaniline	U	265
Dimethyl phthalate	U	166
Acenaphthylene	U	66.2
2,6-Dinitrotoluene	U	166
3-Nitroaniline	U	265
Acenaphthene	U	66.2
2,4-Dinitrophenol	U	662
4-Nitrophenol	U	430
Dibenzofuran	U	166
2,4-Dinitrotoluene	U	166
Fluorene	U	66.2
Diethyl phthalate	U	166
4-Chlorophenyl phenyl ether	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets (Continued)

ANALYTE	Result μg/Kg dry	Analyte Reporting Qualifiers Limit
4-Nitroaniline	U	265
4,6-Dinitro-2-methylphenol	U	662
N-Nitrosodiphenylamine	U	166
4-Bromophenyl phenyl ether	U	166
Hexachlorobenzene	U	166
Atrazine	U	166
Pentachlorophenol	U	166
Phenanthrene	U	66.2
Anthracene	U	66.2
Carbazole	U	166
Di-n-butyl phthalate	U	166
Fluoranthene	U	66.2
Pyrene	U	66.2
Butyl benzyl phthalate	U	166
Benzo (a) anthracene	U	166
3,3'-Dichlorobenzidine	U	166
Chrysene	U	166
Bis(2-ethylhexyl)phthalate	U	166
Di-n-octyl phthalate	U	166
Benzo (b) fluoranthene	U	166
Benzo (k) fluoranthene	U	166
Benzo (a) pyrene	U	166
Indeno (1,2,3-cd) pyrene	U	166
Dibenz (a,h) anthracene	U	166
Benzo (g,h,i) perylene	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	1,770		2,480	71.5	38-101
Phenol-d5	1,880		2,480	75.5	42-105
2-Chlorophenol-d4	1,700		2,480	68.3	40-100
1,2-Dichlorobenzene-d4	1,010		1,660	60.9	37-100
Nitrobenzene-d5	1,250		1,660	75.7	42-108
2-Fluorobiphenyl	1,370		1,660	82.9	51-103
2,4,6-Tribromophenol	2,270		2,480	91.2	55-115
Terphenyl-d14	1,430		1,660	86.5	55-125

Blank (B3D2504-BLK2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
Benzaldehyde	U	166
Phenol	U	166
Bis(2-chloroethyl)ether	U	166
2-Chlorophenol	U	166
1,3-Dichlorobenzene	U	166
1,4-Dichlorobenzene	U	166
Benzyl alcohol	U	166
1,2-Dichlorobenzene	U	166
2-Methylphenol	U	166
Bis(2-chloro-1-methylethyl)ether	U	166
Acetophenone	U	166
3 &/or 4-Methylphenol	U	166
N-Nitrosodi-n-propylamine	U	166
Hexachloroethane	U	166
Nitrobenzene	U	166
Isophorone	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit
2-Nitrophenol	U	166
2,4-Dimethylphenol	U	166
Bis(2-chloroethoxy)methane	U	166
Benzoic acid	U	331
2,4-Dichlorophenol	U	166
1,2,4-Trichlorobenzene	U	166
Naphthalene	U	66.2
4-Chloroaniline	U	166
Hexachlorobutadiene	U	166
Caprolactam	U	166
4-Chloro-3-methylphenol	U	166
2-Methylnaphthalene	U	66.2
Hexachlorocyclopentadiene	U	166
2,4,6-Trichlorophenol	U	166
2,4,5-Trichlorophenol	U	166
2-Chloronaphthalene	U	166
1,1'-Biphenyl	U	166
2-Nitroaniline	U	265
Dimethyl phthalate	U	166
Acenaphthylene	U	66.2
2,6-Dinitrotoluene	U	166
3-Nitroaniline	U	265
Acenaphthene	U	66.2
2,4-Dinitrophenol	U	662
4-Nitrophenol	U	430
Dibenzofuran	U	166
2,4-Dinitrotoluene	U	166
Fluorene	U	66.2
Diethyl phthalate	U	166
4-Chlorophenyl phenyl ether	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

Blank (B3D2504-BLK2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets (Continued)

ANALYTE	Result μg/Kg dry	Analyte Reporting Qualifiers Limit
4-Nitroaniline	U	265
4,6-Dinitro-2-methylphenol	U	662
N-Nitrosodiphenylamine	U	166
4-Bromophenyl phenyl ether	U	166
Hexachlorobenzene	U	166
Atrazine	U	166
Pentachlorophenol	U	166
Phenanthrene	U	66.2
Anthracene	U	66.2
Carbazole	U	166
Di-n-butyl phthalate	U	166
Fluoranthene	U	66.2
Pyrene	U	66.2
Butyl benzyl phthalate	U	166
Benzo (a) anthracene	U	166
3,3'-Dichlorobenzidine	U	166
Chrysene	U	166
Bis(2-ethylhexyl)phthalate	U	166
Di-n-octyl phthalate	U	166
Benzo (b) fluoranthene	U	166
Benzo (k) fluoranthene	U	166
Benzo (a) pyrene	U	166
Indeno (1,2,3-cd) pyrene	U	166
Dibenz (a,h) anthracene	U	166
Benzo (g,h,i) perylene	U	166



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	2,070		2,490	82.9	38-101
Phenol-d5	2,140		2,490	86.0	42-105
2-Chlorophenol-d4	1,950		2,490	78.4	40-100
1,2-Dichlorobenzene-d4	1,220		1,660	73.2	37-100
Nitrobenzene-d5	1,380		1,660	82.8	42-108
2-Fluorobiphenyl	1,510		1,660	90.6	51-103
2,4,6-Tribromophenol	2,890		2,490	116 #	55-115
Terphenyl-d14	1,780		1,660	107	55-125

LCS (B3D2504-BS1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	%REC Limits
Benzaldehyde	1,890	166	1,660	114 #	30-100
Phenol	1,400	166	1,660	84.2	40-101
Bis(2-chloroethyl)ether	1,310	166	1,660	79.0	37-100
2-Chlorophenol	1,370	166	1,660	82.5	41-100
1,3-Dichlorobenzene	1,250	166	1,660	75.4	36-100
1,4-Dichlorobenzene	1,080	166	1,660	65.2	32-100
Benzyl alcohol	1,370	166	1,660	82.3	42-102
1,2-Dichlorobenzene	1,240	166	1,660	74.6	35-100
2-Methylphenol	1,330	166	1,660	80.3	44-100
Bis(2-chloro-1-methylethyl)ether	1,290	166	1,660	77.8	41-100
Acetophenone	1,370	166	1,660	82.3	42-100
3 &/or 4-Methylphenol	1,380	166	1,660	82.8	45-100
N-Nitrosodi-n-propylamine	1,380	166	1,660	83.3	43-100
Hexachloroethane	1,180	166	1,660	71.3	35-100
Nitrobenzene	1,300	166	1,660	78.0	43-100
Isophorone	1,360	166	1,660	81.8	47-100



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits	
2-Nitrophenol	1,540	166	1,660	92.8	46-101
2,4-Dimethylphenol	860	166	1,660	51.7	26-100
Bis(2-chloroethoxy)methane	1,380	166	1,660	82.9	47-100
Benzoic acid	1,560	332	1,660	93.8	10-125
2,4-Dichlorophenol	1,480	166	1,660	88.9	49-101
1,2,4-Trichlorobenzene	1,300	166	1,660	78.2	40-100
Naphthalene	1,330	66.5	1,660	79.9	44-100
4-Chloroaniline	1,250	166	1,660	75.3	37-100
Hexachlorobutadiene	1,290	166	1,660	77.5	42-101
Caprolactam	2,070	166	1,660	125	55-142
4-Chloro-3-methylphenol	1,590	166	1,660	95.6	47-114
2-Methylnaphthalene	1,390	66.5	1,660	83.3	47-101
Hexachlorocyclopentadiene	1,560	166	1,660	93.6	25-108
2,4,6-Trichlorophenol	1,580	166	1,660	95.3	48-105
2,4,5-Trichlorophenol	1,680	166	1,660	101	50-108
2-Chloronaphthalene	1,400	166	1,660	84.4	45-101
1,1'-Biphenyl	1,450	166	1,660	87.3	41-107
2-Nitroaniline	1,680	266	1,660	101	53-112
Dimethyl phthalate	1,590	166	1,660	95.9	53-111
Acenaphthylene	1,460	66.5	1,660	87.7	49-102
2,6-Dinitrotoluene	1,670	166	1,660	100	53-112
3-Nitroaniline	1,540	266	1,660	92.4	50-117
Acenaphthene	1,460	66.5	1,660	87.8	47-101
2,4-Dinitrophenol	1,380	665	1,660	83.0	13-127
4-Nitrophenol	1,900	432	1,660	114	47-130
Dibenzofuran	1,480	166	1,660	89.3	49-104
2,4-Dinitrotoluene	1,760	166	1,660	106	54-112
Fluorene	1,530	66.5	1,660	91.8	49-112
Diethyl phthalate	1,690	166	1,660	102	45-136
4-Chlorophenyl phenyl ether	1,540	166	1,660	92.6	47-113



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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS1)

Prepared: 4/26/2013 Analyzed: 5/20/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	Limits
4-Nitroaniline	1,890	266	1,660	114	61-137
4,6-Dinitro-2-methylphenol	1,680	665	1,660	101	19-136
N-Nitrosodiphenylamine	1,670	166	1,660	100	53-112
4-Bromophenyl phenyl ether	1,630	166	1,660	97.8	50-109
Hexachlorobenzene	1,660	166	1,660	99.9	48-111
Atrazine	1,910	166	1,660	115	61-126
Pentachlorophenol	1,330	166	1,660	80.1	16-122
Phenanthrene	1,620	66.5	1,660	97.6	51-113
Anthracene	1,610	66.5	1,660	96.9	51-114
Carbazole	1,640	166	1,660	98.4	59-124
Di-n-butyl phthalate	1,790	166	1,660	108	57-139
Fluoranthene	1,640	66.5	1,660	98.9	58-120
Pyrene	1,810	66.5	1,660	109	51-119
Butyl benzyl phthalate	2,190	166	1,660	132 #	65-124
Benzo (a) anthracene	1,730	166	1,660	104	59-121
3,3'-Dichlorobenzidine	1,970	166	1,660	118	56-149
Chrysene	1,740	166	1,660	105	58-122
Bis(2-ethylhexyl)phthalate	2,060	166	1,660	124	59-146
Di-n-octyl phthalate	1,980	166	1,660	119	66-127
Benzo (b) fluoranthene	1,820	166	1,660	110	60-119
Benzo (k) fluoranthene	1,920	166	1,660	115	57-130
Benzo (a) pyrene	1,800	166	1,660	108	65-124
Indeno (1,2,3-cd) pyrene	1,650	166	1,660	99.4	61-137
Dibenz (a,h) anthracene	1,740	166	1,660	105	61-137
Benzo (g,h,i) perylene	1,600	166	1,660	96.1	54-139



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Surrogates

ANALYTE	Result µg/Kg dry	Analyte Qualifier	Spike Level	%REC %REC	%REC Limits
2-Fluorophenol	1,810		2,490	72.7	38-101
Phenol-d5	1,860		2,490	74.5	42-105
2-Chlorophenol-d4	1,700		2,490	68.3	40-100
1,2-Dichlorobenzene-d4	1,020		1,660	61.2	37-100
Nitrobenzene-d5	1,260		1,660	75.5	42-108
2-Fluorobiphenyl	1,380		1,660	82.9	51-103
2,4,6-Tribromophenol	2,480		2,490	99.3	55-115
Terphenyl-d14	1,410		1,660	85.0	55-125

LCS (B3D2504-BS2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets

ANALYTE	Result µg/Kg dry	Analyte Qualifiers	Reporting Limit	Spike Level	%REC %REC	%REC Limits
Benzaldehyde	1,300		166	1,660	78.1	30-100
Phenol	1,210		166	1,660	72.9	40-101
Bis(2-chloroethyl)ether	1,150		166	1,660	69.0	37-100
2-Chlorophenol	1,190		166	1,660	71.3	41-100
1,3-Dichlorobenzene	1,060		166	1,660	63.6	36-100
1,4-Dichlorobenzene	1,070		166	1,660	64.2	32-100
Benzyl alcohol	1,300		166	1,660	78.0	42-102
1,2-Dichlorobenzene	1,100		166	1,660	66.2	35-100
2-Methylphenol	1,170		166	1,660	70.2	44-100
Bis(2-chloro-1-methylethyl)ether	1,140		166	1,660	68.8	41-100
Acetophenone	1,170		166	1,660	70.4	42-100
3 &/or 4-Methylphenol	1,140		166	1,660	68.7	45-100
N-Nitrosodi-n-propylamine	1,220		166	1,660	73.4	43-100
Hexachloroethane	1,050		166	1,660	63.1	35-100
Nitrobenzene	1,210		166	1,660	73.1	43-100
Isophorone	1,200		166	1,660	72.2	47-100



Environmental Protection Agency
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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
2-Nitrophenol	1,340	166	1,660	80.9 46-101
2,4-Dimethylphenol	650	166	1,660	39.1 26-100
Bis(2-chloroethoxy)methane	1,270	166	1,660	76.7 47-100
Benzoic acid	1,090	332	1,660	65.6 10-125
2,4-Dichlorophenol	1,330	166	1,660	79.8 49-101
1,2,4-Trichlorobenzene	1,220	166	1,660	73.6 40-100
Naphthalene	1,220	66.5	1,660	73.1 44-100
4-Chloroaniline	1,020	166	1,660	61.2 37-100
Hexachlorobutadiene	1,200	166	1,660	72.0 42-101
Caprolactam	1,640	166	1,660	99.0 55-142
4-Chloro-3-methylphenol	1,430	166	1,660	85.8 47-114
2-Methylnaphthalene	1,250	66.5	1,660	75.0 47-101
Hexachlorocyclopentadiene	1,190	166	1,660	71.7 25-108
2,4,6-Trichlorophenol	1,390	166	1,660	83.6 48-105
2,4,5-Trichlorophenol	1,530	166	1,660	92.3 50-108
2-Chloronaphthalene	1,270	166	1,660	76.5 45-101
1,1'-Biphenyl	1,280	166	1,660	77.2 41-107
2-Nitroaniline	1,570	266	1,660	94.2 53-112
Dimethyl phthalate	1,440	166	1,660	86.4 53-111
Acenaphthylene	1,330	66.5	1,660	80.1 49-102
2,6-Dinitrotoluene	1,550	166	1,660	93.6 53-112
3-Nitroaniline	1,300	266	1,660	78.5 50-117
Acenaphthene	1,310	66.5	1,660	78.6 47-101
2,4-Dinitrophenol	1,280	665	1,660	77.2 13-127
4-Nitrophenol	1,490	432	1,660	89.6 47-130
Dibenzofuran	1,340	166	1,660	80.4 49-104
2,4-Dinitrotoluene	1,560	166	1,660	93.6 54-112
Fluorene	1,350	66.5	1,660	81.4 49-112
Diethyl phthalate	1,460	166	1,660	87.6 45-136
4-Chlorophenyl phenyl ether	1,400	166	1,660	84.0 47-113



Environmental Protection Agency
Region 6 Laboratory

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Semivolatiles by EPA Method 8270 - GC/MS - Quality Control

Batch: B3D2504

Sample Type: Solid

LCS (B3D2504-BS2)

Prepared: 4/26/2013 Analyzed: 5/21/2013

Targets (Continued)

ANALYTE	Result µg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	Limits
4-Nitroaniline	1,710	266	1,660	103	61-137
4,6-Dinitro-2-methylphenol	1,520	665	1,660	91.7	19-136
N-Nitrosodiphenylamine	1,500	166	1,660	90.0	53-112
4-Bromophenyl phenyl ether	1,540	166	1,660	92.9	50-109
Hexachlorobenzene	1,510	166	1,660	90.6	48-111
Atrazine	1,550	166	1,660	93.3	61-126
Pentachlorophenol	1,270	166	1,660	76.6	16-122
Phenanthrene	1,420	66.5	1,660	85.5	51-113
Anthracene	1,430	66.5	1,660	85.9	51-114
Carbazole	1,450	166	1,660	87.4	59-124
Di-n-butyl phthalate	1,420	166	1,660	85.3	57-139
Fluoranthene	1,410	66.5	1,660	84.6	58-120
Pyrene	1,430	66.5	1,660	86.3	51-119
Butyl benzyl phthalate	1,410	166	1,660	85.1	65-124
Benzo (a) anthracene	1,460	166	1,660	88.0	59-121
3,3'-Dichlorobenzidine	1,340	166	1,660	80.3	56-149
Chrysene	1,460	166	1,660	87.9	58-122
Bis(2-ethylhexyl)phthalate	1,360	166	1,660	81.6	59-146
Di-n-octyl phthalate	1,530	166	1,660	91.9	66-127
Benzo (b) fluoranthene	1,470	166	1,660	88.4	60-119
Benzo (k) fluoranthene	1,390	166	1,660	83.9	57-130
Benzo (a) pyrene	1,450	166	1,660	87.2	65-124
Indeno (1,2,3-cd) pyrene	1,500	166	1,660	90.3	61-137
Dibenz (a,h) anthracene	1,600	166	1,660	96.3	61-137
Benzo (g,h,i) perylene	1,360	166	1,660	81.6	54-139



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3005

Sample Type: Liquid

Blank (B3D3005-BLK1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit
Aluminum	U	100
Barium	U	10.0
Beryllium	U	5.0
Cadmium	U	5.0
Calcium	U	150
Chromium	U	10.0
Cobalt	U	20.0
Copper	U	20.0
Iron	U	25.0
Magnesium	U	150
Manganese	U	5.0
Nickel	U	20.0
Potassium	U	1,000
Silver	U	10.0
Sodium	U	500
Vanadium	U	20.0
Zinc	U	20.0

LCS (B3D3005-BS1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Aluminum	1,010	100	1,000	101 75-125
Barium	1,920	10.0	2,000	96.1 75-125
Beryllium	49.1	5.0	50.0	98.3 75-125
Cadmium	48.9	5.0	50.0	97.7 75-125
Calcium	97,200	150	100,000	97.2 75-125
Chromium	390	10.0	400	97.4 75-125



Environmental Protection Agency
Region 6 Laboratory

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Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3005

Sample Type: Liquid

LCS (B3D3005-BS1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC Limits
Cobalt	183	20.0	200	91.4 75-125
Copper	385	20.0	400	96.3 75-125
Iron	970	25.0	1,000	97.0 75-125
Magnesium	99,900	150	100,000	99.9 75-125
Manganese	385	5.0	400	96.3 75-125
Nickel	364	20.0	400	91.1 75-125
Potassium	102,000	1,000	100,000	102 75-125
Silver	45.3	10.0	50.0	90.6 75-125
Sodium	99,800	500	100,000	99.8 75-125
Vanadium	406	20.0	400	102 75-125
Zinc	946	20.0	1,000	94.6 75-125

Matrix Spike (B3D3005-MS1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC Limits
Aluminum	5,530	100	1,000	1,150	438 # 75-125
Barium	2,200	10.0	2,000	282	95.7 75-125
Beryllium	50.7	5.0	50.0	0.2	101 75-125
Cadmium	49.6	5.0	50.0	1.0	97.4 75-125
Calcium	112,000	150	100,000	13,300	98.2 75-125
Chromium	394	10.0	400	1.3	98.2 75-125
Cobalt	188	20.0	200	2.2	92.9 75-125
Copper	399	20.0	400	3.8	98.9 75-125
Iron	7,810	25.0	1,000	6,550	126 # 75-125
Magnesium	103,000	150	100,000	1,240	102 75-125
Manganese	662	5.0	400	304	89.6 75-125
Nickel	369	20.0	400	2.6	91.5 75-125



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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3005

Sample Type: Liquid

Matrix Spike (B3D3005-MS1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets (Continued)

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits
Potassium	120,000		1,000	100,000	15,400	104	75-125
Silver	46.5		10.0	50.0	0.6	91.8	75-125
Sodium	104,000		500	100,000	2,230	102	75-125
Vanadium	420		20.0	400	9.7	103	75-125
Zinc	967		20.0	1,000	18.9	94.8	75-125

Matrix Spike Dup (B3D3005-MSD1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit
Aluminum	5,530		100	1,000	1,150	438 #	75-125	0.06	20
Barium	2,190		10.0	2,000	282	95.5	75-125	0.18	20
Beryllium	50.6		5.0	50.0	0.2	101	75-125	0.10	20
Cadmium	50.0		5.0	50.0	1.0	98.1	75-125	0.79	20
Calcium	110,000		150	100,000	13,300	97.2	75-125	0.95	20
Chromium	396		10.0	400	1.3	98.8	75-125	0.63	20
Cobalt	190		20.0	200	2.2	93.7	75-125	0.83	20
Copper	401		20.0	400	3.8	99.3	75-125	0.40	20
Iron	7,730		25.0	1,000	6,550	118	75-125	1.06	20
Magnesium	103,000		150	100,000	1,240	101	75-125	0.81	20
Manganese	662		5.0	400	304	89.7	75-125	0.08	20
Nickel	371		20.0	400	2.6	92.1	75-125	0.66	20
Potassium	118,000		1,000	100,000	15,400	103	75-125	1.05	20
Silver	45.9		10.0	50.0	0.6	90.7	75-125	1.21	20
Sodium	104,000		500	100,000	2,230	101	75-125	0.82	20
Vanadium	420		20.0	400	9.7	103	75-125	0.06	20
Zinc	965		20.0	1,000	18.9	94.6	75-125	0.20	20



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3007

Sample Type: Solid

Blank (B3D3007-BLK1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit
Aluminum	U	10.0
Barium	U	1.0
Beryllium	U	0.5
Cadmium	U	0.5
Calcium	U	15.0
Chromium	U	1.0
Cobalt	U	2.0
Copper	U	2.0
Iron	U	2.5
Magnesium	U	15.0
Manganese	U	0.5
Nickel	U	2.0
Potassium	U	100
Silver	U	1.0
Sodium	U	50.0
Vanadium	U	2.0
Zinc	U	2.0

LCS (B3D3007-BS1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Aluminum	100	10.0	100	100 75-125
Barium	191	1.0	200	95.3 75-125
Beryllium	5.0	0.5	5.00	99.1 75-125
Cadmium	4.8	0.5	5.00	96.5 75-125
Calcium	9,730	15.0	10,000	97.3 75-125
Chromium	38.7	1.0	40.0	96.7 75-125



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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3007

Sample Type: Solid

LCS (B3D3007-BS1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets (Continued)

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	Limits
Cobalt	18.3	2.0	20.0	91.7	75-125
Copper	38.5	2.0	40.0	96.4	75-125
Iron	96.3	2.5	100	96.3	75-125
Magnesium	10,000	15.0	10,000	100	75-125
Manganese	38.3	0.5	40.0	95.7	75-125
Nickel	36.4	2.0	40.0	90.9	75-125
Potassium	10,300	100	10,000	103	75-125
Silver	4.8	1.0	5.00	96.1	75-125
Sodium	10,200	50.0	10,000	102	75-125
Vanadium	40.4	2.0	40.0	101	75-125
Zinc	93.9	2.0	100	93.9	75-125

Matrix Spike (B3D3007-MS1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits
Aluminum	6,250	12.2	122	3,700	NR #	75-125
Barium	468	1.2	244	293	71.6 #	75-125
Beryllium	6.4	0.6	6.11	0.2	103	75-125
Cadmium	6.6	0.6	6.11	0.6	98.6	75-125
Calcium	14,700	18.3	12,200	1,620	107	75-125
Chromium	62.5	1.2	48.9	11.1	105	75-125
Cobalt	25.4	2.4	24.4	1.5	97.9	75-125
Copper	59.4	2.4	48.9	9.5	102	75-125
Iron	6,290	3.1	122	5,710	473 #	75-125
Magnesium	13,000	18.3	12,200	226	104	75-125
Manganese	186	0.6	48.9	137	99.8	75-125
Nickel	50.2	2.4	48.9	2.8	96.9	75-125



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Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3007

Sample Type: Solid

Matrix Spike (B3D3007-MS1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets (Continued)

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits
Potassium	13,300	122	12,200	366	106	75-125
Silver	6.0	1.2	6.11	0.6	87.8	75-125
Sodium	12,800	61.1	12,200	255	103	75-125
Vanadium	61.5	2.4	48.9	11.5	102	75-125
Zinc	205	2.4	122	116	72.9 #	75-125

Matrix Spike Dup (B3D3007-MSD1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits	RPD RPD	Limit
Aluminum	7,030	10.8	108	3,700	NR #	75-125	11.7	20
Barium	501	1.1	215	293	97.0	75-125	6.96	20
Beryllium	5.8	0.5	5.38	0.2	105	75-125	10.2	20
Cadmium	6.0	0.5	5.38	0.6	100	75-125	10.1	20
Calcium	13,000	16.1	10,800	1,620	105	75-125	12.6	20
Chromium	63.3	1.1	43.1	11.1	121	75-125	1.28	20
Cobalt	22.9	2.2	21.5	1.5	99.3	75-125	10.5	20
Copper	54.0	2.2	43.1	9.5	104	75-125	9.41	20
Iron	7,360	2.7	108	5,710	NR #	75-125	15.8	20
Magnesium	11,600	16.1	10,800	226	106	75-125	11.0	20
Manganese	230	0.5	43.1	137	216 #	75-125	21.2 #	20
Nickel	44.8	2.2	43.1	2.8	97.4	75-125	11.5	20
Potassium	11,900	108	10,800	366	107	75-125	11.4	20
Silver	5.2	1.1	5.38	0.6	85.7	75-125	13.3	20
Sodium	11,700	53.8	10,800	255	106	75-125	9.52	20
Vanadium	59.8	2.2	43.1	11.5	112	75-125	2.88	20
Zinc	223	2.2	108	116	99.6	75-125	8.48	20



Environmental Protection Agency
Region 6 Laboratory

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Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6010 - ICP - Quality Control

Batch: B3D3007

Sample Type: Solid

Reference (B3D3007-SRM1)

Prepared: 4/29/2013 Analyzed: 5/16/2013

Targets

ANALYTE	Result	Analyte	Reporting	Spike	Source	%REC		RPD
	mg/Kg wet	Qualifiers	Limit	Level	Result	%REC	Limits	RPD Limit
Aluminum	99.2		10.0	115		86.3	47.6-152	
Barium	1.5		1.0	1.60		94.0	62.5-137	
Beryllium	4.7		0.5	4.90		95.6	61.2-138	
Cadmium	9.9		0.5	10.9		90.6	70.6-128	
Calcium	43,800		14.9	44,200		99.2	68.6-131	
Chromium	25.3		1.0	27.1		93.4	68.3-131	
Cobalt	34.4		2.0	37.4		92.0	64.7-135	
Copper	1,590		2.0	1,770		89.9	74.6-126	
Iron	6,000		2.5	6,470		92.7	66.2-133	
Magnesium	27,200		14.9	29,200		93.1	70.2-129	
Manganese	56.0		0.5	61.0		91.8	68.2-132	
Nickel	14.3		2.0	16.3		88.0	55.2-145	
Potassium	34.7		99.6	39.7		87.4	0-215	
Silver	4.6		1.0	5.90		78.4	45.8-154	
Sodium	22.6		49.8	72.5		31.1	0-298	
Vanadium	16.6		2.0	17.6		94.1	65.9-134	
Zinc	40.7		2.0	47.5		85.6	43.2-156	



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B3E0101

Sample Type: Solid

Blank (B3E0101-BLK1)

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers	Limit
Mercury	U		0.06

LCS (B3E0101-BS1)

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers	Limit	Spike Level	%REC	%REC Limits
Mercury	0.4		0.06	0.400	102	75-125

Matrix Spike (B3E0101-MS1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers	Limit	Spike Level	Source Result	%REC	%REC Limits
Mercury	0.4		0.07	0.435	0.03	96.3	75-125

Matrix Spike Dup (B3E0101-MSD1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers	Limit	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Mercury	0.3		0.05	0.321	0.03	98.9	75-125	25.5 #	20



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B3E0101

Sample Type: Solid

Reference (B3E0101-SRM1)

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD Limit
Mercury	3.2		0.6	3.59		89.9 51.8-148	



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 7470A/7471 - CVAAS - Quality Control

Batch: B3E0102

Sample Type: Liquid

Blank (B3E0102-BLK1)

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit
Mercury	U	0.200

LCS (B3E0102-BS1)

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Mercury	1.00	0.200	1.00	100 75-125

Matrix Spike (B3E0102-MS1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits
Mercury	1.02	0.200	1.00	0.080	94.0 75-125

Matrix Spike Dup (B3E0102-MSD1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 4/29/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD Limit
Mercury	1.10	0.200	1.00	0.080	102 75-125	7.55 20



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B3D3006

Sample Type: Liquid

Blank (B3D3006-BLK1)

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers	Limit
Antimony	U		5.0
Arsenic	U		5.0
Lead	U		5.0
Selenium	U		5.0
Thallium	U		5.0

LCS (B3D3006-BS1)

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers	Limit	Spike Level	%REC Limits
Antimony	203		5.0	200	102 85-115
Arsenic	197		5.0	200	98.4 85-115
Lead	199		5.0	200	99.6 85-115
Selenium	199		5.0	200	99.3 85-115
Thallium	207		5.0	200	104 85-115

Matrix Spike (B3D3006-MS1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result µg/L	Analyte Reporting Qualifiers	Limit	Spike Level	Source Result	%REC Limits
Antimony	190		5.0	200	0.6	94.9 70-130
Arsenic	206		5.0	200	4.6	101 70-130
Lead	209		5.0	200	11.4	98.8 70-130
Selenium	206		5.0	200	2.0	102 70-130
Thallium	204		5.0	200	1.5	101 70-130



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B3D3006

Sample Type: Liquid

Matrix Spike Dup (B3D3006-MSD1)

Source: 1304031-03

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result µg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit
Antimony	194		5.0	200	0.6	96.8 70-130	2.00	20
Arsenic	208		5.0	200	4.6	102 70-130	0.74	20
Lead	213		5.0	200	11.4	101 70-130	1.86	20
Selenium	205		5.0	200	2.0	102 70-130	0.49	20
Thallium	208		5.0	200	1.5	103 70-130	2.30	20



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B3D3008

Sample Type: Solid

Blank (B3D3008-BLK1)

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit
Antimony	U	0.5
Arsenic	U	0.5
Lead	U	0.5
Selenium	U	0.5
Thallium	U	0.5

LCS (B3D3008-BS1)

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit	Spike Level	%REC %REC	Limits
Antimony	20.4	0.5	20.0	102	85-115
Arsenic	20.1	0.5	20.0	100	85-115
Lead	19.4	0.5	20.0	97.0	85-115
Selenium	20.1	0.5	20.0	101	85-115
Thallium	19.6	0.5	20.0	98.1	85-115

Matrix Spike (B3D3008-MS1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC %REC	Limits
Antimony	15.9	0.6	22.5	0.7	67.5 #	75-125
Arsenic	27.9	0.6	22.5	6.5	95.0	75-125
Lead	75.8	0.6	22.5	56.6	85.4	75-125
Selenium	22.4	0.6	22.5	0.5	97.3	75-125
Thallium	22.1	0.6	22.5	0.3	97.1	75-125



Environmental Protection Agency
Region 6 Laboratory

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Metals by EPA Method 6020 - ICP MS - Quality Control

Batch: B3D3008

Sample Type: Solid

Matrix Spike Dup (B3D3008-MSD1)

Source: 1304030-01

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result mg/Kg dry	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD Limit
Antimony	16.5	0.6	23.0	0.7	69.1 # 75-125	4.05 20
Arsenic	27.9	0.6	23.0	6.5	93.2 75-125	0.03 20
Lead	63.3	0.6	23.0	56.6	29.3 # 75-125	18.0 20
Selenium	23.1	0.6	23.0	0.5	98.7 75-125	3.24 20
Thallium	23.1	0.6	23.0	0.3	99.5 75-125	4.23 20

Reference (B3D3008-SRM1)

Prepared: 4/29/2013 Analyzed: 5/1/2013

Targets

ANALYTE	Result mg/Kg wet	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits	RPD RPD Limit
Antimony	70.9	2.0	66.0		107 41.8-157	
Arsenic	246	2.0	253		97.0 60.8-139	
Lead	54.9	2.0	56.9		96.5 72.7-127	
Selenium	11.1	2.0	10.0		111 41-159	
Thallium	9.9	2.0	9.50		104 30.5-169	



Environmental Protection Agency Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone: (281) 983-2100 Fax: (281) 983-2248

OFFICIAL CHAIN OF CUSTODY RECORD

PROJ. NO.	PROJECT NAME	CAMP MINDED LA	EXPLO SYSTEMS	NO. OF CONTAINERS	STATION LOCATION	REMARKS
SAMPLERS: (Signature) <u>Paul D. James</u>						
STA. NO.	DATE	TIME	COMP.	GRAB	ABN (B210)	TCLP METALS (HOLD)
1	4/17/13	12:40	X	SS-01	+ NLS / MSD	TAG No: 304400, 304401, 304406, 304407
2	4/17/13	11:15	X	SS-02	7/16/13 / MSD	TAG No: 304405, 304404, 304411, 304410
3	4/17/13	14:15	X	SS-03	4/17/13 / MSD	TAG No: 304408, 304414, 304415, 304409
4	4/17/13	14:45	X	SS-04	7/16/13 / MSD	TAG No: 304413, 304412, 304419, 304418
5	4/17/13	15:20	X	SS-05	7/16/13 / MSD	TAG No: 304422, 304423, 304417, 304416
6	4/17/13		X	SS-06	MSD	MATRIX SPIKE
7	4/17/13		X	SS-07	MSD	MATRIX SPIKE DUPLICATE
8	4/17/13	14:25	X	SS-DUP		TAG No: 304430, 304431, 304432, 304433
Relinquished by: (Signature) <u>Debra</u> Date / Time <u>4/17/13 17:00</u> Received by: (Signature) <u>UPS</u> Date / Time <u>4/18/13 9:45</u>						
Relinquished by: (Signature) <u>Debra</u> Date / Time <u>4/17/13 17:00</u> Received by: (Signature) <u>UPS</u> Date / Time <u>4/18/13 9:45</u>						
Relinquished by: (Signature) <u>Debra</u> Date / Time <u>4/17/13 17:00</u> Received by: (Signature) <u>UPS</u> Date / Time <u>4/18/13 9:45</u>						
Remarks: ① HOLD ON TCLP ABN & TCLP METALS. ② RUN ON METALS INCLUDE Hg.						

6-08259

EPA 7500-53 (11/96)
Distribution: White Accompanies Shipment; Pink to Coordinator Field Files;
Green to Report; Yellow Returns with Warrant



Environmental Protection Agency
Region 6 Laboratory

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Notes and Definitions

RL	The reporting limit for this analyte was raised because absence or presence at the routine or lower value could not be verified"
R	The presence or absence of the analyte can not be determined from the data due to severe quality control problems. The data are rejected and considered unusable.
J	The identification of the analyte is acceptable; the reported value is an estimate.
A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
ABN	Acid Base Neutrals (Semivolatile Compounds)
AES	Atomic Emission Spectrometer
BS	Blank Spike
CVAA	Cold Vapor Atomic Absorption
DCB	Decachlorobiphenyl
ECD	Electron Capture Detector
GC	Gas Chromatograph
ICP	Inductively Coupled Plasma
ISTD	Internal Standard
LCS	Laboratory Control Sample
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
PCB	Polychlorinatedbiphenyl
RL	Reporting Limit



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RT	Retention Time
TCLP	Toxicity Characteristic Leaching Procedure
TCMX	Tetrachloro-meta-xylene
U	Undetected
VOA	Volatile Organic Analysis
#	Out of QC limits

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).

The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Laboratory

Environmental Services Branch
10625 Fallstone Road, Houston, TX 77099
Phone: (281)983-2100 Fax: (281)983-2248

Final Analytical Report

Site Name -----Explo
Sample Collection Date(s)-- 04/17/13
Contact----- Paul James (6EN-HC)
Report Date----- 06/17/13
Project #----- 13RCRA092
Work Order(s)----- 1304030

Analyses included in this report:

Metals TCLP ICP 1311/6010B (Pb)

Report Narrative

Sample Management:

This report contains the TCLP Lead results only. The Semi-volatile and Total Metals results were previously reported.

TCLP:

Lead extracts and associated QC were analyzed at a 1:5 dilution due to high sodium concentrations.

Standard procedures for quality assurance and quality control were followed in the analysis and reporting of the sample results. The results apply only to the samples tested. This final report should only be reproduced in full.

Reporting limits are adjusted for sample size and matrix interference.

Report Approvals:

Richard McMillin
Region 6 Laboratory Manager

David Neleigh
Region 6 Laboratory Branch Chief



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 6 Environmental Services Branch Laboratory

10625 Fallstone Road
Houston, Texas 77099

Sample Receipt and Disposal

Site Name: Explo

Project Number: 13RCRA092

Data Management Coordinator: Christy Warren

Data Management Coordinator Signature

Date

Date Transmitted: ____/____/____

Please have the U.S. EPA Project Manager/Officer call the Data Management Coordinator at 3-2137 for any comments or questions.

Please sign and date this form below and return it with any comments to:

Christy Warren
Data Management Coordinator
Region 6 Laboratory
6MD-HS

Received by and Date

Comments:

The laboratory routinely disposes of samples 90 days after all analyses have been completed. If you have a need to hold these samples in custody longer than 90 days, please sign below.

Signature

Date

Please provide a reason for holding:



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

ANALYTICAL REPORT FOR SAMPLES

Station ID	Laboratory ID	Sample Type	Date Collected	Date Received
2	1304030-02	Solid	4/17/13 11:15	04/18/13 09:45
5	1304030-05	Solid	4/17/13 15:00	04/18/13 09:45



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

TCLP Metals by EPA Method 1311/6010-ICP

Lab ID: 1304030-02

Station ID: 2

Batch: B3F0413

Date Collected: 04/17/13

Sample Type: Solid

Sample Vol: 50ml

Sample Qualifiers:

Batch Matrix: Solid

TCLP Prepared: 6/3/13

Targets

Analyte (CAS Number)	Result mg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Lead (7439-92-1)	U		0.2	5	06/04/13	06/12/13 ts

TCLP Metals by EPA Method 1311/6010-ICP

Lab ID: 1304030-05

Station ID: 5

Batch: B3F0413

Date Collected: 04/17/13

Sample Type: Solid

Sample Vol: 50ml

Sample Qualifiers:

Batch Matrix: Solid

TCLP Prepared: 6/3/13

Targets

Analyte (CAS Number)	Result mg/L	Analyte Qualifiers	Reporting Limit	Dilution	Prepared	Analyzed
Lead (7439-92-1)	2.1		0.2	5	06/04/13	06/12/13 ts



Environmental Protection Agency
Region 6 Laboratory

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Phone:(281)983-2100 Fax:(281)983-2248

TCLP Metals by EPA Method 1311/6010-ICP - Quality Control

Batch: B3F0413

Sample Type: Solid

Blank (B3F0413-BLK1)

Prepared: 6/4/2013 Analyzed: 6/12/2013

Targets

ANALYTE	Result mg/L	Analyte Reporting Qualifiers Limit
Lead	U	0.03

Blank (B3F0413-BLK2)

Prepared: 6/4/2013 Analyzed: 6/12/2013

Targets

ANALYTE	Result mg/L	Analyte Reporting Qualifiers Limit
Lead	U	0.03

LCS (B3F0413-BS1)

Prepared: 6/4/2013 Analyzed: 6/12/2013

Targets

ANALYTE	Result mg/L	Analyte Reporting Qualifiers Limit	Spike Level	%REC Limits
Lead	0.3	0.03	0.400	81.4 75-125

Matrix Spike (B3F0413-MS1)

Source: 1304030-05

Prepared: 6/4/2013 Analyzed: 6/12/2013

Targets

ANALYTE	Result mg/L	Analyte Reporting Qualifiers Limit	Spike Level	Source Result	%REC Limits
Lead	6.8	0.2	5.00	2.1	94.1 75-125



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

TCLP Metals by EPA Method 1311/6010-ICP - Quality Control

Batch: B3F0413

Sample Type: Solid

Matrix Spike Dup (B3F0413-MSD1)

Source: 1304030-05

Prepared: 6/4/2013 Analyzed: 6/12/2013

Targets

ANALYTE	Result mg/L	Analyte Qualifiers	Reporting Limit	Spike Level	Source Result	%REC Limits	RPD RPD	RPD Limit
Lead	6.7		0.2	5.00	2.1	93.2 75-125	0.72	20



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
Phone:(281)983-2100 Fax:(281)983-2248

Notes and Definitions

A	This sample was extracted at a single acid pH.
HTS	Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.
ABN	Acid Base Neutrals (Semivolatile Compounds)
AES	Atomic Emission Spectrometer
BS	Blank Spike
CVAA	Cold Vapor Atomic Absorption
DCB	Decachlorobiphenyl
ECD	Electron Capture Detector
GC	Gas Chromatograph
ICP	Inductively Coupled Plasma
ISTD	Internal Standard
LCS	Laboratory Control Sample
MS	Mass Spectrometer
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NA	Not Applicable
NPD	Nitrogen Phosphorous Detector
NR	Not Reported
PCB	Polychlorinatedbiphenyl
RL	Reporting Limit
RT	Retention Time
TCLP	Toxicity Characteristic Leaching Procedure
TCMX	Tetrachloro-meta-xylene
U	Undetected



Environmental Protection Agency
Region 6 Laboratory

10625 Fallstone Road, Houston, TX 77099
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VOA Volatile Organic Analysis

Out of QC limits

Initial pressure in air analyses is the pressure at which the canister was received in psia (pounds *per* square inch absolute pressure).

The pH reported for Volatile liquid samples was tested using a 0-14 pH indicator strip for the purpose of verifying chemical preservation.

The statistical software used for the reporting of toxicity data is ToxCalc 5.0.32, Environmental Toxicity Data Analysis System 1994-2007 Tidepool Scientific Software.



**EPA REGION 6 ENFORCEMENT DIVISION
INSPECTION REPORT**

FRS #:	110043230928 & 110003363583		D&B #	063822204
Media #:	LAR000072223 & LAR000032607		Permit #	LAR000072223-OP-1
Inspection Type:	RCRA Corrective Action Inspection – USEPA Lead with Env. Sampling			
Inspection Date:	April 15-18, 2013			
Company Name:	EXPLO SYSTEMS, INCORPORATED			
Facility Name:	S-LINE - EXPLO SYSTEMS, INCORPORATED			
Physical Location:	1600 Java Road (S-Line), Camp Minden			
	Minden, Louisiana 71055			
Mailing Address:	1600 Java Road			
	Minden, Louisiana 71055			
County/Parish:	Webster Parish			
SIC Code:	2892 (Explosives), 3483 (Ammunition), 8748 (Business consulting, nec)			
NAICS Code:	32592, 56211, 54171, and 541618			
Reg Programs (Ex: SIP, Title V):	RCRA Program / § 3002, § 3004, § 3005, and § 3010			
Facility Representatives:	Mr. Terry Wright		V.P. of Operations	318-382-8700
	Mr. C. Ferris Callihan		Dir. of Support Tech.	318-470-9433
	Mr. Cliff Morrison		Dir. of Operations	318-402-7292
EPA Inspectors:	Mr. Paul James	6EN-HC	Enforcement Officer	214-665-6445
	Mr. Charles Barnes	6EN-HM	Enforcement Officer	214-665-6535
State Inspectors:	Mr. Michael Miller, et.al.	LDEQ - OEA	Env. Scientist	225-219-3038
EPA Lead Inspector				
Signature/Date	Paul James, Enforcement Officer			Date
Peer Reviewer				
Signature/Date:	William Mansfield, Enforcement Officer			Date
Enforcement Officer				
Signature/Date	Charles Barnes, Enforcement Officer			Date
Supervisor				
Signature/Date	Guy Tidmore, Section Chief			Date

Section I – INTRODUCTION

Purpose of the Inspection

The purpose of the visit to Explo Systems, Inc. (Explo) facility in Minden, Louisiana was to conduct a Resource Conservation and Recovery Act (RCRA) Inspection. The inspection was conducted congruently in two sections: Compliance Evaluation Inspection (CEI), which was led by EPA Region 6 Hazardous Waste Compliance Enforcement Section (6EN-HE), and Corrective Action Inspection (CAI) which was conducted and led by the EPA Region 6 Hazardous Waste Corrective action and Compliance Section (6EN-HC). Both sections were to visually assess current environmental conditions at the facility, and to gain an understanding of the facility's processes and waste management practices.

<p>Note: This RCRA CAI Report is a supplement to the 2013 RCRA CEI Report. For compliance concerns and operational depictions, please refer to the CEI report.</p>

EPA Region 6 inspectors Ms. Joyce Johnson, Mr. John Penland and Mr. Paul James (Myself) arrived at Camp Minden in the afternoon of April 15, 2013 for an announced inspection. Prior to the inspection, we first met with LDEQ inspectors Mr. Michael Miller, Mr. Kevin O'Brien and Mr. Theron Megers along with Sgt. John Wyles of the Louisiana State Police. During the time of the inspection, the facility was under state control due to improper storage of a military propellant, and Sgt. Wyles was the on-scene commander. This initial meeting was to discuss the purpose, logistics and limitations of the inspections, the overall setting/circumstances at the facility, and health and safety concerns.

After the initial meeting with Officer Wyles, the inspection team (EPA and LDEQ) went to Explo's laboratory building to meet with Mr. Terry Wright (Explo's Vice President of Operations) and Mr. C. Ferris Callihan (Explo's Director of Support Technologies) for the opening inspection meeting. All EPA inspectors presented their credentials to Mr. Wright and Mr. Callihan. I informed them that EPA with the assistance of LDEQ was here to conduct a RCRA inspection and to note any concerns regarding RCRA compliance regulations, RCRA corrective action regulations, and the management of the facility's hazardous waste operating permits.

I explained that Mr. Penland would be conducting a RCRA CEI to assess the facilities compliance with state and federal regulations concerning waste generation and handling, while I would be conducting a RCRA CAI to assess the environmental conditions at the site and to determine if any potential release(s) of hazardous constituents from the facility's operations may have occurred. I handed Mr. Wright a copy of the RCRA Section 3007 that explains EPA's authority to conduct the inspection. Additionally, I explained Explo's right to claim confidential business information (CBI). CBI was later claimed during the CEI inspection concerning portions of their operational practices. These practices are not depicted in this report.

Facility Description

Explo's facility is a munitions demilitarization facility which resides as a lease holder within a portion of Camp Minden. Camp Minden, formerly known as the Louisiana Army Ammunition Plant, was a military installation comprising approximately 14,995 acres of land. It is located near Doyline, Louisiana in Webster and Bossier Parishes. In 1941, the United States government acquired ownership of the Camp Minden property. The installation was subsequently constructed and used by the U.S. Army to load, assemble and pack (LAP) munitions and manufacture ammunition metal parts. Camp Minden was transferred from the Federal Government to the State of Louisiana in January 2005. At the time of the transfer there were 22 commercial tenants leasing property from the Federal Government. One of the conditions of the property transfer was that the State of Louisiana would honor any existing leases in place at that time. Explo was a commercial tenant at the time of the transfer and still is today.

In February 2007, Explo signed a new commercial lease agreement from the State of Louisiana for certain property at Camp Minden, noted during the inspection as the "S-Line" and numerous certified munitions magazines (igloos) within areas L-2 and L-3, as shown below:

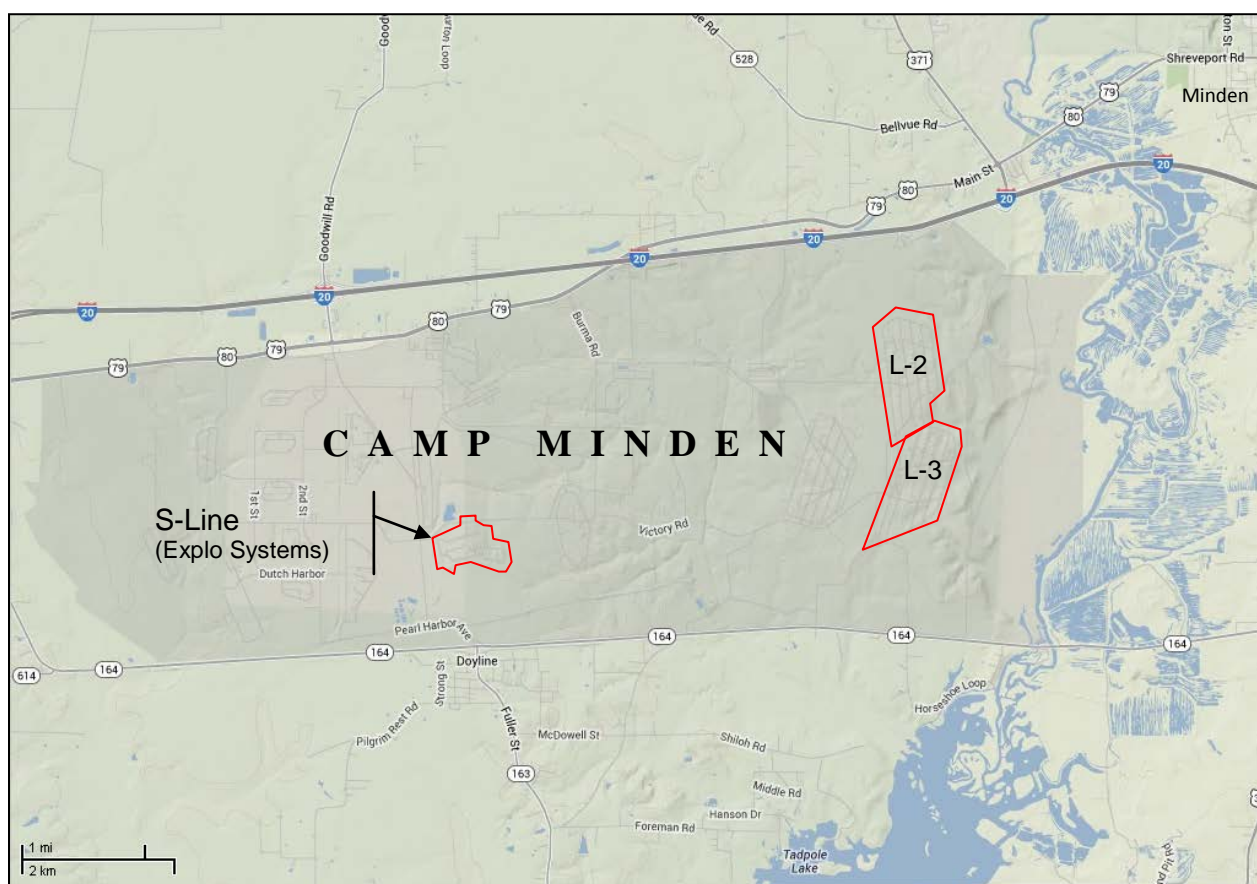


Figure 1: Facility location map of Camp Minden with S-Line, L-2 and L-3 areas noted within.
Base Map Source: Google Maps (www.maps.google.com)

The S-Line is approximately 110 acres and consists of numerous buildings that are used for the purpose of conducting demilitarization operations under DoD contract for the demilitarization of D533 Charges, Propellant, 155mm, M 119A2, and Explo's subsequent commercial recycling operations of the demilitarized propellant. The magazines are used to store Explo's end product and potentially hazardous waste as defined in the permit.

Explo processes, stores, and disposes of military munitions items through contracts with the Department of Defense and other explosives producing/manufacturing activities. The processing activities may change the physical shape and or appearance by removing the materials from their original containers/components. Those materials are then processed for reuse/recycling by other industries such as mining and/or construction. Residual materials may be disposed of at off-site facilities. Explo Systems has a RCRA Open Burn/Open Detonation permit with the state of Louisiana. For operational depictions, please refer to the CEI report.

Environmental Setting:

Northwest Louisiana lies within the East Texas Timber Belt subdivision of the West Gulf Coastal Plain physiographic province. Camp Minden is located in an area with three major landform types, including uplands in the west, slightly rolling low land in the east, and the ancient Red River floodplain underlying the central portion of the installation. The topography is primarily the result of erosion caused by surface drainage to the tributaries of the Red River and has generated a relatively level to moderately rolling topography.

Surface Hydrology

All surface water runoff from Camp Minden exits along the southern boundary by four natural streams that originate north of the plant. Bayou Dorcheat forms the eastern boundary of the Camp, while Clarke Bayou forms the western boundary. Boone Creek and its tributaries drain the eastern and central portions and flow into Bayou Dorcheat. Caney Branch and the man-made Unnamed Ditch drain the western portions then flow into Clarke Bayou. Both Clarke Bayou and Bayou Dorcheat flow into Lake Bistineau south of the Camp.

Explo is located on the S-Line, in the center of a broad topographic high that forms a drainage divide between Clarke Bayou, 2.5 miles to the west, and Boone Creek, 2.5 miles to the east. Surface drainage predominantly flows to the east. Most of the surface water runoff from the S-Line has been directed via man-made ditches to tributaries of Boone Creek to the east. Surface drainage to the north and northwest (north side of Java Road) is poor and standing water was noted during the inspection.

Geology

The geologic units underlying Camp Minden consist of unconsolidated sediments ranging in age from Eocene to Pleistocene. The major strata are the Pleistocene terrace deposits (alluvium), and the Tertiary Claiborne Group Formations (Sparta Sand, Cane River, and Carrizo Sand), and the Tertiary Wilcox Group.

The Pleistocene terrace deposits cover the entire surface of Camp Minden. This uppermost geologic stratum is an alluvium consisting of inter-layered, discontinuous sand seams, silt, and clay.

These sediments represent floodplain and fluvial deposits of the ancestral Red River and have been classified into four separate terraces. Camp Minden is positioned on the Montgomery terrace, the second youngest terrace in this classification. The thickness of the Pleistocene section at Camp Minden ranges from 30 to 150 feet and rests

unconformably on top of the Claiborne Group. Formations at the installation had been eroded before or during deposition of the terrace strata, resulting in a structural unconformity. At Camp Minden, the Claiborne Group consists of the Sparta Sand, Cane River, and Carrizo Sand formations.

A Remedial Investigation (RI) was conducted by IT in 1999 which included the S-Line. Each sampling location was chosen in conjunction with the Army Environmental Center (AEC) and EPA. For the S-Line, the nature and extent of contamination was characterized by collecting and testing 107 soil samples. Explosives detected in surface samples (0-6 inches below ground surface) at S-Line were greater than industrial screening levels. Explosives detected in subsurface samples (> 6 inches below ground surface) at S-Line were less than industrial screening levels. VOC were not detected at concentrations greater than industrial screening

TABLE 1
Generalized Geologic Column, Northeast Louisiana

Sys-tem	Stratigraphic Unit		Description and typical thickness	Hydrologic unit
Quaternary	Terrace deposits (undifferentiated)		Sand, gravel, and some clay. Limited to western part of study area. Thickness probably about 50 ft.	
				Terrace Aquifer
Tertiary	Claiborne Group	Cook Mountain Formation	Clay, partly sandy; glauconitic. Thickness about 100 to 200 ft.	Confining bed (partially)
		Sparta Sand	Interbedded clay and fine to medium sand; lignitic. Thickness about 400 to 700 ft. Unit is 20 to 100 percent sand.	Sparta Aquifer
		Cane River Formation	Clay; glauconitic, lignitic. Thickness about 100 to 300 ft.	Confining bed
		Carrizo Sand	Fine to coarse sand; discontinuous. Thickness to 150 ft.	Wilcox-Carrizo Aquifer
	Wilcox Group	Undifferentiated	Interbedded clay, sand, silt; lignitic. Thickness about 390 to 850 ft. Unit is 20 to 30 percent sand.	
	Midway Group	Undifferentiated	Dense clay. Thickness about 600 ft.	Confining bed

levels. SVOC were detected in one sample at concentrations greater than industrial screening levels. Arsenic was detected in surface and subsurface samples at concentrations exceeding the industrial screening level. Arsenic concentrations were attributed to approved pesticide usage and not process-related impacts.

Hydrogeology

The shallow aquifer underlying Camp Minden consists of Pleistocene terrace deposits that form the entire surface of installation. Groundwater in the Upper Terrace aquifer generally exists under water-table (unconfined) conditions at depths typically 25 feet below ground surface. The direction of groundwater flow in the Upper Terrace aquifer is controlled primarily by topography and the surface water system. At S-Line the groundwater flow direction is towards the east. Although terrace aquifer production wells are not located at Camp Minden, the aquifer supports production wells off the installation. Domestic wells using the terrace aquifer have been completed in the surrounding towns of Haughton, Princeton, Dixie Inn, Minden, Sibley, and Doyline.

Directly beneath the Upper Terrace aquifer is the Lower Terrace/Sparta Sand aquifer, an important aquifer in the north- central portion of the state and the principal source of drinking water for the town of Minden, located 2 miles northeast of Camp Minden. However, the Lower Terrace/Sparta Sand thins rapidly from Minden westward into the installation. Where the Lower Terrace/Sparta Sand aquifer exists at Camp Minden, a hydraulic communication exists between this aquifer and the overlying Terrace deposits, resulting in unconfined conditions.

The Wilcox Group/Carrizo Sand aquifer is the principal aquifer supplying groundwater to Camp Minden. The average depth of the formation ranges from 100 feet below ground surface in the southwestern portion of the installation to 500 feet below ground surface in the northeastern portion. A groundwater gradient of 50 feet per mile toward the northeast exists in the Wilcox/Carrizo aquifer. Camp Minden had previously derived all of its water for plant operation from wells screened in sand layers of the Wilcox aquifer.

Camp Minden was placed on the National Priorities List in 1989, has a construction complete date of 2010, and groundwater monitoring activities (monitoring natural attenuation) are ongoing.

Section II – RCRA CORRECTIVE ACTION INSPECTION OBSERVATIONS

On the morning of April 16, 2013, I arrived on site with Ms. Johnson, and Mr. Penland to commence the facility tour/inspection with LDEQ inspectors (Mr. Miller, Mr. O'Brien, Mr. Megers and Ms. Lane), and Mr. Wright. Prior to the tour, the inspection team met with Col. Ronald Stuckey and Sgt. Wyles with his team of state police officers to define the roles and tasks for the facility tour.

Later that morning, the inspection team met with Mr. Wright and commenced the inspection of the facility. For safety, the inspection team was escorted by the state police who at the time had custody of Explo's property. Under RCRA corrective action, my task during the facility tour was to observe and note (1) any past and current releases of hazardous constituents, (2) potential hazardous constituent pathways, (3) affected media, and (4) receptors in the area. When I noted concerns during the facility tour, the potentially affected media was slated for environmental sampling. Sampling was conducted on April 17-18. Photos were taken during the facility tour as well as during the sampling event. My inspection photos are presented in Appendix A of this report. Satellite images of the sample locations with coordinates are presented in Appendix B. Analytical laboratory reports are presented in Appendix C.

During the inspection, on April 15 (during opening inspection meeting) and April 16, 2013 (during the facility tour), I asked Mr. Wright for all of Explo's spill reports to help focus my inspection. Mr. Wright stated that Explo never had any spills and therefore there are no reports.

During the inspection, several areas were identified as areas of potential releases of hazardous constituents. These areas are listed below:

TABLE 2
Areas of Potential Impact to the Environment

Location No.	Observations
1	Roll-off Box (No. 4034): This 40 yard ³ container (22' x 8' x 8') was located on the southeastern corner of the facility road that leads to Building 1624. It was conceived at the time of the inspection, and later confirmed, that the roll-off box contained hazardous wastes. It was also noted that the box was not covered with a tarp and rain water could enter the box and drip out of the leaking rear hatch. At the time of the inspection, a clear liquid, potentially water with hazardous constituents, was dripping onto the ground surface from the rear hatch. A surface soil sample (SS-01) and photographs were taken.
2	Red Water Concentration Area: This area is located in Building 1619. During the inspection, a curbed segment of the concrete pad had a crack that appeared on both side of the curb giving evidence of a potential release. Mr. Wright stated to me that Explo did not use this area. Later, Mr. Morrison stated to Mr. Penland that the area was used to concentrate the red water in open 55-gallon steel drums by

	boiling the water using evaporation coils. This process had a potential for spills. A surface soil sample (SS-02) was collected below the crack and photographs were taken.
3	Roll-off Box (No. 3068): This 30 yard ³ container (22' x 8' x 6') was located on the south side of Building 1617. It was conceived at the time of the inspection that this container had leaks, noted by some dark colored stains on the ground. Also in the box, a small puddle of pink colored translucent liquid was noted. It was also noted that the box was not covered with a tarp and rain water could enter the box and potentially drip out of the rear hatch. Since the box was on an asphalt surface, a surface soil sample (SS-03) was collected down-gradient and adjacent to the asphalt surface. Photographs were taken.
4	Drainage Ditch Adjacent to Unprotected M-6 Propellant Storage: During the inspection it was noted that M-6 Propellant was stored improperly outdoors and was removed in February 2013. Based on previous inspections and satellite imagery (Appendix B), approximately 575 pallets with M-6 propellant was stored on an asphalt drive east of building 1617. Therefore, surface soil sample (SS-04) was collected down-gradient from the drainage ditch adjacent to the asphalt drive/storage area in question. Photographs were taken.
5	M-6 Propellant on Ground: During the inspection it was noted that pellets of M-6 Propellant were disposed onto the ground, just outside the eastern door from the crusher line at Building 1617. Surface soil sample (SS-05) and photos were taken in the area of potential impact.
6	West end of Building/Bunker 1631: During the inspection it was noted that sand on the ground adjacent to the opening of Building/Bunker 1631 had similar characteristics with the sand inside the building. The sand inside the building was used as burn pit for the disposal of explosive materials (i.e. cluster bombs). Since the sand had similar characteristics, surface soil sample (SS-06) and photos were taken in the area of potential impact.
7	Inside of Building/Bunker 1631: During the inspection it was noted that Building/Bunker 1631 was being used as a burn pit for the disposal of explosive materials (i.e. cluster bombs). Inside the building the floor was covered in sand with a center pile of sand with a depression in the middle. Since the sand noted outside of the building was sampled and the integrity of the building's floor was unknown, surface soil sample (SS-07) and photos were taken in the area for sample comparison and potential contaminant impact to the environment.
8	N/A: Duplicate sample location for quality assurance/control. Surface soil sample SS-08 is a duplicate of surface soil sample SS-03.
9	Surface Water Between Roll-off Box (No. 3068) and Unprotected M-6 Propellant Storage: During the inspection it was noted that standing water was present in a low area between Roll-off Box (No. 3068) and an area where unprotected M-6 Propellant was stored. The water appeared to have drained from both of these areas therefore a surface water sample (WS-01) and photos were taken.

On April 17-19, Charles Barnes (EPA Region 6 Enforcement) joined the inspection team. On April 17-18, Mr. Barnes, Mr. Miller, Mr. O'Brien, and Mr. Megers assisted me in collecting environmental samples at the locations defined in Table 2. All samples were split to provide the facility duplicate samples along with a copy of the Chain of Custody. On April 17, I relinquished the facility's samples to Mr. Morrison, and on April 18, I relinquished the facility's samples to Mr. Callihan. EPA's samples were shipped on ice at the end of each day to EPA's laboratory in Houston Texas via *UPS Next Day Air*.

Samples were analyzed for (1) Acid/Base Neutral extractables (ABN) using EPA Method SW846-8270, (2) Target Analyte List (TAL) Metals using EPA method SW846/6010B/6020, and (3) Mercury using EPA method SW846/7470A/7471A. All analytical results are summarized in Table 3 and compared with LDEQ screening standards. EPA's laboratory reports are provided in Appendices 3 and 4.

Due to the total lead concentrations in surface soil sample SS-02 at 110 mg/kg and sample SS-05 at 963 mg/kg, the laboratory re-ran the samples to determine if the samples exhibit hazardous waste characteristics using EPA's toxicity characteristic leaching procedure (TCLP) 1311/6010-ICP (see Appendix 4). Lead concentration in surface soil samples SS-02 and SS-05 were below TCLP D-list maximum contamination levels (MCLs) at <0.2 mg/L at 2.1 mg/L, respectively.

On the morning of April 19, EPA's inspection team met with Mr. David Tolbert from the U.S. Army and toured the former Explo facility located at Camp Minden's E-Line. This facility was closed and moved to the S-Line due to several explosions and a fire that gutted the facility in August 2006. CEI concerns were noted during the tour and are presented in 2013 RCRA CEI report. For corrective action, no concerns were noted, but it was not a thorough inspection due to time restraints and the majority of the facility was overgrown with small conifer trees.

Later in the day, EPA and LDEQ had an exit briefing/interview with Mr. Wright and Mr. Callihan. This briefing was lead by Mr. Penland and is detailed in his report. No corrective action concerns were discussed during this briefing, but Mr. Wright did request a copy of my inspection report. After the exit briefing and farewells, all members of the inspection team exited the facility.

'Table 3: Analytical Summary Table for ABN 8270 Routine List in Surface Soil and Water

Sample Number	1	2	3	4	5	6	7	8 *	9	LDEQ RECAP					
Sample Location	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-DUP	WS-01	SCREENING STANDARDS FOR SOIL AND GROUNDWATER					
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	SOIL_SSni	SOIL_SSi	SOIL_SSGW	GW_SS		
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/L	mg/Kg	mg/Kg	mg/Kg	mg/L		
1,1'-Biphenyl	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.30E+02 P	2.30E+02 P	1.90E+02 A	3.00E-02 N		
1,2,4-Trichlorobenzene	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	6.60E+01 N	1.20E+03 N	1.40E+01 A	7.00E-02 MCL		
1,2-Dichlorobenzene	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	9.90E+01 N	3.80E+02 P	2.90E+01 A	6.00E-01 MCL		
1,3-Dichlorobenzene	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	2.10E+00 N	1.80E+01 N	2.10E+00 A	1.00E-02 Q		
1,4-Dichlorobenzene	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	6.70E+00 C	1.60E+01 C	5.70E+00 A	7.50E-02 MCL		
2,4,5-Trichlorophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	5.30E+02 N	6.60E+03 N	3.20E+02 A	3.70E-01 N		
2,4,6-Trichlorophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	4.00E+01 C	1.70E+02 C	1.30E+00 A	1.00E-02 Q		
2,4-Dichlorophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	1.60E+01 N	2.00E+02 N	1.20E+01 A	1.10E-02 N		
2,4-Dimethylphenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	9.30E+01 N	1.10E+03 N	2.00E+01 A	7.30E-02 N		
2,4-Dinitrophenol	< 2.57	< 2.32	< 2.6	< 2.87	< 2.31	< 2.05	< 1.99	< 2.61	< 0.0196	7.10E+00 N	6.90E+01 N	1.70E+00 Q	5.00E-02 Q		
2,4-Dinitrotoluene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	0.861	< 0.653	< 0.0049	8.90E+00 N	9.80E+01 N	1.00E+00 A	1.00E-02 Q		
2,6-Dinitrotoluene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	4.30E+00 N	4.60E+01 N	3.90E-01 A	1.00E-02 Q		
2-Chloronaphthalene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	5.00E+02 N	8.30E+03 N	5.00E+02 A	4.90E-02 N		
2-Chlorophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	1.50E+01 N	1.40E+02 N	1.40E+00 A	1.00E-02 Q		
2-Methylnaphthalene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	2.20E+01 N	1.70E+02 N	1.70E+00 A	6.20E-04 N		
2-Methylphenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
2-Nitroaniline	< 1.03	< 0.928	< 1.04	< 1.15	< 0.924	< 0.821	< 0.798	< 1.04	< 0.0079	1.70E+00 Q	1.70E+00 Q	1.70E+00 Q	5.00E-02 Q		
2-Nitrophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
3 &/or 4-Methylphenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
3,3'-Dichlorobenzidine	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	9.70E-01 C	4.20E+00 C	1.80E+00 A	2.00E-02 Q		
3-Nitroaniline	< 1.03	< 0.928	< 1.04	< 1.15	< 0.924	< 0.821	< 0.798	< 1.04	< 0.0079	1.30E+01 N	1.40E+02 N	1.70E+00 Q	5.00E-02 Q		
4,6-Dinitro-2-methylphenol	< 2.57	< 2.32	< 2.6	< 2.87	< 2.31	< 2.05	< 1.99	< 2.61	< 0.0196						
4-Bromophenyl phenyl ether	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
4-Chloro-3-methylphenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
4-Chloroaniline	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
4-Chlorophenyl phenyl ether	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049						
4-Nitroaniline	< 1.03	< 0.928	< 1.04	< 1.15	< 0.924	< 0.821	< 0.798	< 1.04	< 0.0079	1.00E+01 N	1.00E+02 N	1.70E+00 Q	5.00E-02 Q		
4-Nitrophenol	< 1.67	< 1.51	< 1.69	< 1.87	< 1.5	< 1.33	< 1.3	< 1.7	< 0.0128	3.20E+01 N	3.30E+02 N	2.60E+00 A	5.00E-02 Q		
Acenaphthene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	3.70E+02 N	6.10E+03 N	2.20E+02 A	3.70E-02 N		
Acenaphthylene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	3.50E+02 N	5.10E+03 N	8.80E+01 A	1.00E-01 Q		

Table 3: Analytical Summary Table for ABN 8270 Routine List in Surface Soil and Water (continued)

Sample Number	1	2	3	4	5	6	7	8 *	9	LDEQ RECAP SCREENING STANDARDS FOR SOIL AND GROUNDWATER			
Sample Location	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-DUP	WS-01	SOIL_SSni	SOIL_SSi	SOIL_SSGW	GW_SS
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	mg/Kg	mg/Kg	mg/Kg	mg/L
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/L	mg/Kg	mg/Kg	mg/Kg	mg/L
Acetophenone	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Anthracene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	2.20E+03 N	4.80E+04 N	1.20E+02 A	4.30E-02 W
Atrazine	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Benzaldehyde	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Benzo (a) anthracene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.20E-01 C	2.90E+00 C	3.30E+02 A	7.80E-03 Q
Benzo (a) pyrene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.30E-01 Q	3.30E-01 Q	2.30E+01 A	2.00E-04 MCL
Benzo (b) fluoranthene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.20E-01 C	2.90E+00 C	2.20E+02 A	4.80E-03 Q
Benzo (g,h,i) perylene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Benzo (k) fluoranthene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.20E+00 C	2.90E+01 C	1.20E+02 A	2.50E-03 Q
Benzoic acid	< 1.28	< 1.16	< 1.3	< 1.44	< 1.15	< 1.03	< 0.997	< 1.31	< 0.0098				
Benzyl alcohol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Bis(2-chloro-1-methylethyl)ether	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	4.90E+00 C	1.70E+01 C	8.00E-01 Q	5.70E-03 Q
Bis(2-chloroethoxy)methane	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Bis(2-chloroethyl)ether	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.30E-01 Q	1.10E+00 C	3.30E-01 Q	5.70E-03 Q
Bis(2-ethylhexyl)phthalate	< 0.642	< 0.58	< 0.649	< 0.718	1.03	< 0.513	< 0.499	< 0.653	< 0.0049	3.50E+01 C	1.70E+02 C	7.90E+01 A	6.00E-03 MCL
Butyl benzyl phthalate	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.20E+02 P	2.20E+02 P	2.20E+02 P	7.30E-01 N
Caprolactam	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Carbazole	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049				
Chrysene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.20E+01 C	2.90E+02 C	7.60E+01 A	1.60E-03 W
Dibenz (a,h) anthracene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.30E-01 Q	3.30E-01 Q	5.40E+02 A	2.50E-03 Q
Dibenzofuran	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.90E+01 N	1.50E+02 P	2.40E+01 A	1.00E-02 Q
Diethyl phthalate	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.70E+02 P	6.70E+02 P	3.60E+02 A	2.90E+00 N
Dimethyl phthalate	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	1.50E+03 P	1.50E+03 P	1.50E+03 P	3.70E+01 N
Di-n-butyl phthalate	< 0.642	< 0.58	< 0.649	< 0.718	0.66	< 0.513	0.652	< 0.653	< 0.0049				
Di-n-octyl phthalate	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.40E+02 N	3.50E+03 N	1.00E+04 P	2.00E-02 W
Fluoranthene	< 0.257	< 0.232	< 0.26	< 0.287	0.56	< 0.205	< 0.199	< 0.261	< 0.002	2.20E+02 N	2.90E+03 N	1.20E+03 A	1.50E-01 N
Fluorene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	2.80E+02 N	5.40E+03 N	2.30E+02 A	2.40E-02 N
Hexachlorobenzene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.40E-01 C	2.00E+00 C	9.60E+00 A	1.00E-03 MCL
Hexachlorobutadiene	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	8.20E-01 N	8.60E+00 N	5.50E+00 A	7.30E-04 N
Hexachlorocyclopentadiene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	1.40E+00 N	9.40E+00 N	1.20E+03 A	5.00E-02 MCL

Table 3: Analytical Summary Table for ABN 8270 Routine List in Surface Soil and Water (continued)

Sample Number	1	2	3	4	5	6	7	8 *	9	LDEQ RECAP			
Sample Location	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-DUP	WS-01	SCREENING STANDARDS FOR SOIL AND GROUNDWATER			
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	SOIL_SSni	SOIL_SSi	SOIL_SSGW	GW_SS
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/L	mg/Kg	mg/Kg	mg/Kg	mg/L
Hexachloroethane	< 0.642	< 1.74	< 0.649	< 2.16	< 0.577	< 1.54	< 0.499	< 1.96	< 0.0049	5.20E+00 N	6.80E+01 N	2.20E+00 A	1.00E-02 Q
Indeno (1,2,3-cd) pyrene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	6.20E-01 C	2.90E+00 C	9.20E+00 A	3.70E-03 Q
Isophorone	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.40E+02 C	1.10E+03 C	5.60E-01 A	7.00E-02 C
Naphthalene	< 0.257	< 0.232	< 0.26	< 0.287	< 0.231	< 0.205	< 0.199	< 0.261	< 0.002	6.20E+00 N	4.30E+01 N	1.50E+00 A	1.00E-02 Q
Nitrobenzene	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.20E+00 N	2.50E+01 N	3.30E-01 Q	1.90E-03 Q
N-Nitrosodi-n-propylamine	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	3.30E-01 Q	3.30E-01 Q	3.30E-01 Q	1.00E-02 Q
N-Nitrosodiphenylamine	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	9.00E+01 C	4.00E+02 C	2.10E+00 A	1.40E-02 C
Pentachlorophenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	2.80E+00 C	9.70E+00 C	1.70E+00 Q	1.00E-03 MCL
Phenanthrene	< 0.257	< 0.232	< 0.26	< 0.287	0.258	< 0.205	< 0.199	< 0.261	< 0.002	2.10E+03 N	4.30E+04 N	6.60E+02 A	1.80E-01 N
Phenol	< 0.642	< 0.58	< 0.649	< 0.718	< 0.577	< 0.513	< 0.499	< 0.653	< 0.0049	1.30E+03 N	1.50E+04 N	1.10E+01 A	1.80E-01 N
Pyrene	< 0.257	< 0.232	< 0.26	< 0.287	0.627	< 0.205	< 0.199	< 0.261	< 0.002	2.30E+02 N	5.60E+03 N	1.10E+03 A	1.80E-02 N

Notes:

- < = The analyte was not detected at or above the reported value.
- * = Sample no. 8 is a field duplicate of sample no. 3.
- A - Based on algorithm contained in Appendix H.
- B - Based on EPA's bio-kinetic and adult lead cleanup level models for lead.
- C - Based on carcinogenic health effects.
- D - DEQ established background level plus one standard deviation = 11.5.
- L - Soil level protective of groundwater for inorganic constituents based on leachability.
- L1 - Soil level protective of groundwater for inorganic constituents based on GW 1 because TCLP value not listed. M - Based on EPA's Maximum Contaminant Level (MCL) for drinking water.
- N - Based on non-carcinogenic health effects.
- P - Soil Saturation Limit is less than health based level thus default to soil saturation limit.
- S - Soil level protective of groundwater for inorganic constituents based on the maximum concentration for the beneficial use of sewage sludge.

Table 4: Analytical Summary Table for TAL Metals plus Mercury in Surface Soil and Water

Sample	1	2	3	4	5	6	7	8 *	9	LDEQ RECAP			
Sample	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06	SS-07	SS-DUP	WS-01	SCREENING STANDARDS FOR SOIL AND GROUNDWATER			
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Water	SOIL_SSni	SOIL_SSi	SOIL_SSGW	GW_SS
Units	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/L	mg/Kg	mg/Kg	mg/Kg	mg/L
Aluminum	3700	8150	7820	7430	7910	3590	1970	6760	1150				
Antimony	0.7	< 0.6	< 0.6	< 0.7	2	< 0.5	< 0.5	< 0.6	< 0.005	3.10E+00 N	8.20E+01 N	1.20E+01 L1	6.00E-03 MCL
Arsenic	6.5	3	8	3.8	6.7	5.2	0.6	7.8	< 0.005	1.20E+01 D	1.20E+01 D	1.00E+02 L	1.00E-02 MCL
Barium	293	69.4	1200	75.1	247	192	58.4	957	282	5.50E+02 N	1.40E+04 N	2.00E+03 L	2.00E+00 MCL
Beryllium	< 0.6	< 0.6	0.6	< 0.7	< 0.5	< 0.5	< 0.5	< 0.6	< 0.005	1.60E+01 N	4.10E+02 N	8.00E+00 L1	4.00E-03 MCL
Cadmium	0.6	1.3	2.4	0.8	3.8	< 0.5	< 0.5	2.1	< 0.005	3.90E+00 N	1.00E+02 N	2.00E+01 L	5.00E-03 MCL
Calcium	1620	2150	6940	1360	1000	1290	749	4280	13300				
Chromium	11.1	22.2	17.2	14.1	57.6	5.3	2.4	17.7	< 0.01	1.20E+04 N	3.10E+05 N	1.00E+02 L	1.00E-01 MCL
Cobalt	< 2.5	4.4	4.3	< 3	3.3	2.2	< 1.9	4	< 0.02	4.70E+02 N	1.20E+04 N	4.40E+03 L1	2.20E-01 N
Copper	9.5	131	18.3	27.4	258	2.5	3	19.8	< 0.02	3.10E+02 N	8.20E+03 N	1.50E+03 S	1.30E+00 MCL
Iron	5710	9560	15500	9840	12500	5450	1900	14400	6550				
Lead	56.6	110	67.3	46.8	963	7.2	5.2	69.1	11.4	4.00E+02 B	1.40E+03 B	1.00E+02 L	1.50E-02 MCL
Magnesium	226	383	985	451	317	420	265	382	1240				
Manganese	137	183	450	36	114	142	40.1	339	304				
Mercury	< 0.05	< 0.07	0.1	0.2	7.2	< 0.07	< 0.06	0.1	< 0.0002	2.30E+00 N	6.10E+01 N	4.00E+00 L	2.00E-03 MCL
Nickel	2.8	25.5	6.7	3.6	9.2	2.4	< 1.9	7.1	< 0.02	1.60E+02 N	4.10E+03 N	1.50E+03 L1	7.30E-02 N
Potassium	366	601	1630	475	221	414	144	1410	15400				
Selenium	< 0.6	< 0.6	< 0.6	< 0.7	< 0.5	< 0.5	< 0.5	0.6	< 0.005	3.90E+01 N	1.00E+03 N	2.00E+01 L	5.00E-02 MCL
Silver	< 1.2	< 1.2	< 1.3	< 1.5	< 1	< 1.1	1.4	< 1.3	< 0.01	3.90E+01 N	1.00E+03 N	1.00E+02 L	1.80E-02 N
Sodium	255	67.6	69.5	< 74.3	< 50	< 53.6	< 47.8	< 64.4	2230				
Thallium	< 0.6	< 0.6	< 0.6	< 0.7	< 0.5	< 0.5	< 0.5	< 0.6	< 0.005	1.40E+02 N	1.40E+03 P	3.10E+01 A	1.10E-01 N
Vanadium	11.5	19.6	28.6	22.3	16.9	11.2	7.3	27	< 0.02	5.50E+01 N	1.40E+03 N	5.20E+02 L1	2.60E-02 N
Zinc	116	127	128	88	720	10.8	17.2	155	< 0.02	2.30E+03 N	6.10E+04 N	2.80E+03 S	1.10E+00 N

NOTES:

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- A - Based on algorithm contained in Appendix H.
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- L1 - Soil level protective of groundwater for inorganic constituents based on GW 1 because TCLP value not listed.
- M - Based on EPA's Maximum Contaminant Level (MCL) for drinking water.
- N - Based on non-carcinogenic health effects.
- P - Soil Saturation Limit is less than health based level thus default to soil saturation limit.
- S - Soil level protective of groundwater for inorganic constituents based on the maximum concentration for the beneficial use of sewage sludge.

Section III – AREAS OF CONCERN

Most of the concerns noted during the RCRA inspection were compliance based and are presented in the 2013 RCRA CEI report.

Based on visual inspection, corrective action concerns were noted as present in Table 2 and should be addressed if/when the facility becomes operational. Meanwhile, several concerns could be addressed immediately to assure contamination does not enter into the environment:

- The roll-off boxes should be covered and/or the contents of the boxes be disposed of properly to assure that contamination does not enter into the environment.
- All areas where M-6 propellant has been identified and/or disposed to the ground (e.g. outside the eastern door from the crusher line at Building 1617) should be assessed and disposed of properly.
- Analytical results had exceedances with LDEQ RECAP screening standards for soil (SS-03 and SS-05) and surface water (WS-01). These areas should be evaluated and assessed under LDEQ RCAP to determine if and what corrective action may be required.
- All units that are no longer being used (e.g. E-Line's carbon units and frac/separator unit) should be cleaned and closed to reduce the potential of a release into the environment.
- Due to the catastrophic event at E-Line, there was a potential for release of contaminants during the fire/explosions, and some contaminants may still be present in the environment (e.g. friable asbestos).

APPENDIX A

RCRA CORRECTIVE ACTION INSPECTION

PHOTOGRAPHIC LOG

APPENDIX B

SAMPLE LOCATION MAP

APPENDIX C

FINAL ANALYTICAL REPORT

Analyses included in this report:

ABN 8270 Routine List

Metals ICP 6010B

Metals ICP-MS 6020

Metals Mercury 7470A/7471A

Solids, Dry Weight

APPENDIX D

FINAL ANALYTICAL REPORT

Analyses included in this report:

Metals TCLP ICP 1311/6010B (Pb)